DRUG AND COSMETIC INDUSTRY

APRIL 1938

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The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 West 31st St., New York, N. Y.

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LEGISLATION

STEP by step, this industry becomes more closely restricted by new legislation. Now the advertising of this industry is to be under the close scrutiny of the Federal Trade Commission, which is empowered to watch out for the public interest in this manner. Not that this is the only industry to have its advertising regulated in the public interest—,for the Wheeler-Lea Act empowers the Federal Trade Commission to watch for deceitful acts and practices in all industries—but that this industry is to be the subject of other legislation in enactment of a new Federal Food and Drugs Act, as well as many similar state laws.

THIS industry, however, is being singled out as one which has a great public responsibility. And because of this responsibility, the legislators believe that they can write any sort of laws concerning it. Realizing the high purpose of the laws as they are written, and realizing that attempts to correct the provisions of these laws put them in an unfavorable light, manufacturers are loath to oppose such legislation. The only thing that manufacturers can do is attempt to indicate to the legislators how the provisions of these laws would work against the public interest.

LEGISLATORS naturally cannot be expected to understand all about every industry which they seek to regulate by legislation. Therefore, they must obtain their information from the government departments which are to have the power under the proposed legislation. These departments are quite prone to try to get such complete power that if they got it they would not know what to do with it. Therefore it becomes incumbent upon legislators to listen carefully to those engaged in the industries to be regulated, for only by listening to both sides can these legislators expect to get a law that will do the job that is desired, and that will stand up in the courts.

UNDULY to restrict this industry will have the effect of stiffling progress in medicine, raising the cost of medical care, cause both scientific talent and capital to seek other fields, and generally work against the interests of the public health.

NEW and NON-OFFICIAL

NOW THAT VIRGINIA HAS ADDED to its Fair Trade Act the section by which non-signers of price maintenance contracts are bound by contracts signed by others, this state now has real price maintenance. Without this section in the law, any attempt at price maintenance is quite useless as the Californians found out several years ago.

The thing that is in the minds of farsighted manufacturers who are using the Fair Trade Acts to control the prices at which their goods are resold is the possibility of the government interfering in the setting of these prices. For there is quite a feeling that if the government gives manufacturers laws by which these manufacturers can fix the prices at which their goods are sold, then the government should also have the right, in the public interest, to determine whether these prices are being fixed at low enough levels. Thus far manufacturers are of the opinion that if the government does step in, the only thing that the manufacturer will have to do is to stop fixing prices and then the government will step out again. However, it might be as simple as this as regards government interference, nor will it be so easy, as far as the retail and wholesale trades are concerned, to abandon a price maintenance course once it has been established and is operating smoothly.

IT IS GRATIFYING FROM ONE POINT and disappointing from another that shortly after price maintenance was established we headed into a recession. Not that we are stupid enough to try and tie up price maintenance with the recession, but we shall be most interested in seeing just how much price maintenance helps the retailers to stay in business during the present period. We all remember the recent depression and the attempts at cooperation designed to pull the retailers out of the hole and thus make good the credits of the wholesalers and the manufacturers. Several attempts were made at price maintenance as a means of bringing this about. Finally, the Drug Institute of America was brought forth as a big and glorious means of saving the situation. Now that we have price maintenance and a recession at the same time, the situation should be quite different than it was during the recent depression.

The unfortunate part of heading into a depression just as price maintenance gets under way, is that it is difficult for manufacturers, wholesalers, and retailers to tell how much of the decline is due to the recession and how much is due to the higher prices in effect. Manufacturers might be suspicious that price maintenance is driving consumers to private brand merchandise, and wholesalers and retailers might believe the higher prices are causing consumers to buy less goods in their stores. Careful analysis is necessary before anyone arrives at conclusions.

TO DEFINE A COSMETIC SOUNDS like a simple problem, but try it sometime. We have seen many definitions, but it is difficult to write one that does not cover too much or too little territory. But the Wheeler-Lea Act, which extends the powers of the Federal Trade Commission to include supervision of advertising in the interest of the public, contains a definition that we have never seen before. It reads:

"The term cosmetic means (1) articles to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof intended for cleansing, beautifying, promoting attractiveness, or altering the appearance, and (2) articles intended for use as a component of any such article; except that the term shall not include soap."

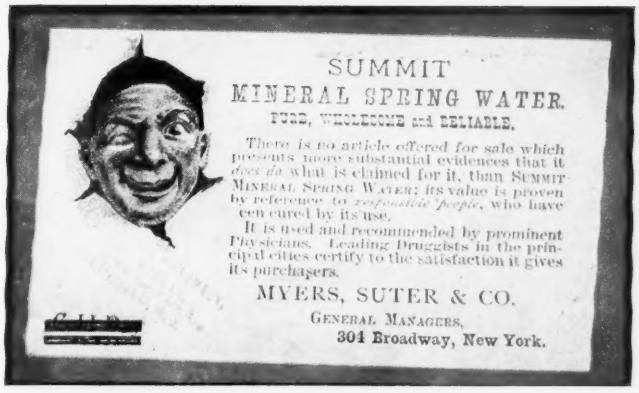
Maybe this definition is a good one, but we still wonder what is meant by product "introduced into" the body for cleansing, beautifying, promoting attractiveness, or altering the appearance. We are inclined to the opinion that such products are food, drink, or drugs.

THE WHEELER-LEA ACT REPRESENTS a real fundamental change in the law of this country. For it gives the Federal Trade Commission the power to protect the public from deceptive acts and practices of manufacturers in all industries. Therefore, although the bill specifically mentions advertising in this industry, the fact of the matter is that the Act gives the Federal Trade Commission control of the advertising of all products of all industries. So, after May twenty-first, manufacturers of cigarettes, automobiles, and anything else one can think of will have to watch their advertising copy and methods of merchandising to be certian that they are in no way attempting to deceive the public.

THE STRUGGLE OVER THE NEW Federal, Food, Drug, and Cosmetic Bill reached great heights during the past month. While little information regarding the situation came to light generally, attorneys and other officials of drug trade associations were real busily engaged trying to get the House Committee in charge of the bill to make such changes as officials of the industry believed were essential for the welfare of the industry. Representatives of groups of ethical manufacturers were concerned chiefly with the provision to control the marketing of new and untried products, while representatives of proprietary medicine manufacturers were particularly interested in provisions relating to misbranding of products.

The chances for the enactment of a bill appear to be the best ever, and before another month passes by the industry might be busily engaged in studying a new law that will become effective within a year.

Our Family Album


SUMMIT
MINERAL SPRING WATER.
PURE, WHOLESOME and RELIABLE.
There is no article offered for sale which presents more substantial evidences that it does do what is claimed for it, than SUMMIT MINERAL SPRING WATER; its value is proven by reference to responsible people, who have been cured by its use.
It is used and recommended by prominent Physicians. Leading Druggists in the principal cities certify to the satisfaction it gives its purchasers.
MYERS, SUTER & CO.
GENERAL MANAGERS,
304 Broadway, New York.

Another beauty of the nineteenth century, used to advertise a product "used and recommended by prominent physicians."

THE TREND TOWARD SOCIALIZATION OF MEDICINE is caused by nothing other than the fact that a large percentage of the population of the country does not have the money to consult physicians. And for the same reason as these people do not have the money to consult physicians, they do not have the money to eat food, sufficient or proper to prevent many diseases. Likewise they are not able to live under conditions that prevent diseases. For these reasons, this group of people are subject to more attacks of illness than people who are able to call in physicians and who are able to eat plenty of the right kinds of food.

The problem has been studied from analysis of the various costs entering into medical treatment and care. In certain diseases, the treatment can be quite quickly indicated by the physician and it is then up to the patient to take certain medicines over a rather prolonged period of time. This is particularly true of the deficiency diseases to which the poorer people are subject. The proper control of these diseases then becomes a matter of producing certain products as cheaply as they can be produced and then working to produce them at still lower prices.

It is for this reason, more than any other, that the increasing amount of research being conducted to produce the vitamins and other products synthetically at lower prices is important to this industry. The cheaper medicinal products can be made and sold, the wider will be their use and the better will be the health of the nation. And lest the drug manufacturers think that better general health throughout the nation means less business in drug products, let us indicate just a few facts. In the first place, the better the health of the nation the greater will be the wealth of the nation. The more general the results obtained with products of this sort, the more widespread will be their use and the greater will be the confidence of the general public in the products of this industry. Further, lower prices and more general distribution of drug products to improve the health of the nation will greatly offset the attempts to socialize medicine.

WE REFERRED TO A LEADING BRAND of Milk of Magnesia last month, telling of plans of a new large sized package to be marketed as a means of making price-fixing on the product feasible. The new size package will be twenty-six ounces, and not twenty-four ounces as we stated. The present largest size is twelve ounces which is a fifty cent seller but generally cut to twenty-nine cents in the large cities. As the twenty-six ounce size will be a seventy-five cent seller, with a minimum price of fifty-nine cents, the consumer will be able to buy the product just as cheaply as he did before. Furthermore, the twenty-six ounce size is a new one on the market and makes it just a little more confusing for anyone to try and compare its value with other products.

RIGHT IN THE MIDDLE OF CONSIDERATION of the proposed Federal Food and Drugs Act, and at a time when a serious struggle is going on over the provision that would establish control over the marketing of newly discovered drug products, the industry receives another blow. This time six people have died in Florida following the use of a serum, Ensol, which was imported from Canada for treatment of cancer.

Of course the product was used only by a physician who says that he has given ten thousand injections of the products without any undesirable recetions, yet now six people have died with all the symptoms of tetanus. Furthermore, the laboratory producing the product in Canada states that there has never been a change made for any of the lots of the product distributed. The product was not stated to be a cure for cancer, but merely a relief.

Undoubtedly, it appears that a lot of the product was contaminated. But this does not help the situation as far as the drug manufacturers are concerned. It will be generally placed in the same category as the "Elixir of Sulfanilamide" tragedy, and more clamor for extremely drastic legislation will result. A statement by the Minister of Public Health of Canada that the product was barred from sale or distribution in Canada is not going to help the situation here.

The tragedy resulting from the use of this product appears to be simply an example of the fallability of human nature either in making the product, shipping it, or administering it. But whatever it is, we shall expect it to be used to apply the pressure for rigid control over the products and laboratories of all manufacturers.

CHAIN STORES HAVE BEEN TAXED and hampered to such an extent that the number of stores in some of the leading chains has been cut materially. Because the tax is on the number of units rather than on the volume of business done, the stores which do not have sufficient volume to pay the tax and a profit must go. Larger units with a high volume of business per unit must be the result of this trend to tax the chains as close to death as possible.

But there are those among the chain store executives who do not want to have this type of business die without a real fight. Such a fight would take the form of education of the consumers to what the chains have done for them in giving them efficient service and low prices. The consumer would be told of the political moves that are responsible for this persecution of the chains.

SOME MONTHS AGO WE POINTED OUT that when manufacturers made resale contracts with wholesalers, it was likely that they bound themselves to the prices in these contracts in their sales to retailers, since non-signers are bound by price maintenance contracts. Further, we indicated that the Robinson-Patman Act could also be applied since this law forbids a manufacturer from quoting prices which unfairly compete with the customers of those to whom he sells.

On March 31 a case of this sort was decided in the New York Supreme Court. Naturally the case was decided upon the State Fair Trade Act and not on the Federal Robinson-Patman Act. The plaintiff was the Gillette Safety Razor Company, and the defendant was the Charles Green Sales Company. The Green Company is a wholesaler who was selling Gillette blades to retailers below the prices stipulated in the Gillette manufacturer-wholesaler contract. Gillette sued for injunction. The injunction was refused because the Gillette Company itself had been selling direct to retailers at prices below those stipulated in the contracts.

NEW F. T. C. AD CONTROL

By H. C. HALLAM

ARMED with the new Wheeler-Lea Act with plenty of teeth in it, the Federal Trade Commission is planning an extensive program of advertising regulation having particular reference to drugs, cosmetics, devices and foods, in which advertising fields the Commission has found a multiplicity of offenses—some say abuses. One of the first steps taken by the Commission in this connection has been assignment to Commissioner Robert Elliott Freer of supervision over the work of the Special Board in the Commission's set-up, which has for several years been handling cases involving alleged false advertising. When Commissioner Freer received the representative of The DRUG AND COSMETIC INDUSTRY recently, he was engaged in conference with law officers of the Commission's staff.

It was explained that no new plans or policies had been decided upon as yet regarding administration and enforcement of the new law. It appears that the Commission will "make haste slowly" in handling the new Wheeler-Lea law, just as it did a year or two ago in the case of the Robinson-Patman anti-price discrimination law. Under the circumstances, the course to be followed by the Commission will not be apparent immediately. A month or two, or more, will be required to develop that course. From a general survey, however, the following probabilities are regarded as practical certainties:

(1) The new law will not be interpreted or enforced retroactively. In other words, the Commission is not expected to proceed under the new law against false advertising put out before March 21, 1938, when President Roosevelt signed the act. These responsible for false advertising before that date may protect themselves from Commission attack, it is expected, if their advertising has been revised to bring it within the law since that date.

(2) The machinery of the Federal Trade Commission for dealing with false advertising, it was expected, will be modernized and streamlined. This may entail important changes in methods of handling and procedure and possibly changes in organization.

COMMISSIONER R. E. FREER

(3) The rules of practice and procedure before the Commission will be amended so as to provide for carrying out the provisions of the new law.

Besides the advertising regulatory provisions, the Act contains other features of far-reaching importance. This is the first time in its history of nearly 25 years that the law creating the Federal Trade Commission has been amended. Other laws have been passed and amended meanwhile for the Commission to administer. The Robinson-Patman law, for example, was principally amendatory of the Clayton anti-trust law, which the Commission administers jointly with the Department of Justice.

One of the most important features of the new law is the prohibition against "unfair or deceptive acts or practices in commerce." These violations of the law are in addition to "unfair methods of competition," forbidden by the original F.T.C. act. This amendment of

THE FEDERAL TRADE COMMISSION
CHARLES H. MARCH, ROBERT E. FREER, CHAIRMAN GARLAND FERGUSON, EDWIN L. DAVIS, WILLIAM A. AYRES

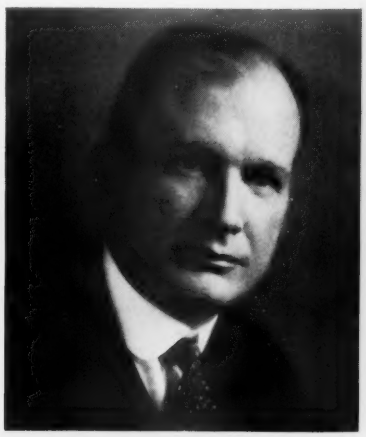
the law is of special and peculiar interest to the drug trade.

The background of it goes back to the decision of the United States Supreme Court against the Commission, on its complaint against the Raladam Company which involved the latter's Marmola Prescription, alleged anti-fat remedy. In that case the Commission charged unfair competition in the form of false advertising in that the preparation containing desiccated thyroid was represented to be safe for general use. Raladam was ordered to "cease and desist" from such representation and from failing to disclose in its ads the presence of a dangerous and potentially harmful drug.

The court threw the Commission's case out the window on the ground that it had not shown that some actual or potential competitor of Raladam had been injured by the Marmola advertisement. The evidence appeared to indicate that all competitors were engaged in similar practices. In its decision the Supreme Court said: "If the necessity for protecting the public against dangerously misleading advertisements of a remedy sold in interstate commerce were all that is necessary to give the Commission jurisdiction, the order (of the Commission) could not successfully be assailed."

Shortly thereafter, the Commission began a new investigation of Raladam and Marmola and later filed a

REPRESENTATIVE CLARENCE F. LEA



SENATOR BURTON K. WHEELER

E. J. ADAMS

second formal complaint against the concern which it was prepared to back up with evidence of injury to its competitors.

Ever since the Marmola decision efforts have been made in Congress, which ultimately succeeded in the enactment of the Wheeler-Lea law, to amend the F.T.C. act so as to relieve the Commission of the necessity of showing injury to competitors in cases of "unfair or deceptive acts or practices." This new provision, according to its authors, was designed primarily to protect the consuming public. Under it the Commission can proceed against a concern engaged in such acts or practices without the necessity of showing the element of competition.

In a recent statement touching on the new law, Commissioner Freer said, among other things: "Perhaps an explanation of the background of this additional legislation will not only help make clear to you the Commission's present procedure, but also the changes which will result if this act is approved by the President." (It had not then been signed). He then referred to the Marmola case, without naming it, and the court's decision in which it "questioned the Commission's power to preserve the 'business of one knave from the unfair competition of another.'"

Mr. Freer went on to say that the new act "broadens Section 5 of our act to make unlawful not only unfair methods of competition, but also unfair and deceptive acts and practices; it also greatly strengthens the Commission's procedure for dealing swiftly and justly with advertisements of foods, drugs and cosmetics. Under the new act the Commission hopes to be able more fully to protect the consuming public. Our activities under Section 5 (of the F.T.C. Act) range from important cases involving conspiracies and combinations to fix prices and control production in major industries to simple cases of false advertising—some of them, however, of the most flagrant sort."

Now let us look closer at some of the teeth in the new law. The prohibition against unfair or deceptive acts or practices has been mentioned. These may be stopped by cease and desist orders to be issued by the Commission. Formerly, if such an order was not obeyed, the Commission would have to appeal to the Federal courts and show not only that its order had been violated, but that the order was justified originally. Under the new law, Commission orders become final 60 days after issuance unless a drug or cosmetic manufacturer or other respondent files exception and appeals to the federal Circuit Court of Appeals for review of the case. The court has full power to affirm, enforce, modify, or set aside a Commission order. For violation of a Commission order a respondent is subject to a penalty up to $5,000 fine.

Then consider the provisions of the new law directed against false advertising. All types of misleading advertising may be brought under the Commission's jurisdiction, it is claimed—that affecting the purchaser in his pocket book as well as that affecting his health and well-being. Congress considered it advisable to add new provisions to the law on account of the importance of the public health.

Drugs, cosmetics, devices, and false advertising are defined in the new law along lines similar to those followed in the new food and drug bill recommended by the House Committee on Interstate and Foreign Commerce. The Commission is invested with authority to proceed through Federal district courts to secure a temporary injunction against a respondent, to prevent dissemination of false advertising, when deemed advisable in the interest of the public. This provision is preventive in character, thus avoiding the charge that the Commission in the past has locked the stable door after the horse was stolen, in handling proceedings involving alleged false advertising and other unfair methods of competition.

A fine up to $5,000 and/or imprisonment for six months is provided for in the new law as penalties for the first offense in disseminating false advertising of a drug, cosmetic, device or other product dangerous to health when used as directed or under the use that is usual or customary. For subsequent offenses the penalties are doubled under the law.

The same penalties are provided for as applying to a manufacturer, for example, who is found guilty of disseminating advertising with an intent to defraud or mislead.

Of special interest to advertisers is the provision in Paragraph (B) of Section 14 of the new law, which specifically exempts publishers, broadcasting licenses, agencies or other media for disseminating advertising from the penalties of the law, provided they supply to the Commission, upon its request, the name and address of the manufacturer, packer, distributor, seller, or advertising agency in the United States responsible for advertising under investigation or complaint by the Commission. From this provision it is perfectly clear that the manufacturer, packer, distributor, seller or advertising agency concerned may be held entirely responsible for every statement that appears or is used that is intended to promote the sale of his product.

Under the law prosecutions would be handled by the Department of Justice on the basis of facts supplied by the Commission.

Drug and cosmetic trade representative organizations are understood to be preparing to assist their members in bringing their advertising copy into line with the law. It has been suggested to manufacturers that they insist upon their advertising agencies basing statements upon facts contained in manufacturers' files to substantiate claims which manufacturers desire to make for their preparations. It is pointed out to manufacturers that they will find it easier to comply with the requirements of the law if they secure facts upon which to base their advertising statements and before they are called on the carpet by the Federal Trade Commission. After such a call, it is pointed out, it may be very difficult to produce evidence to substantiate advertising statements theretofore made. The cooperation of advertising agencies has been invited by some of the trade organizations.

The Proprietary Association has an Advisory Committee on Advertising to review copy of its members.

The opinion has been expressed by well-informed persons close to the F.T.C. and to practices in the drug trades that the Commission would probably have little difficulty proving that advertising copy appearing in certain types of publications was prepared deliberately with intent to deceive. Reference is here made to certain cosmetic advertising guaranteeing to make any woman beautiful and advertising of certain gland preparations, so-called rejuvenators and the like.

While the new law is very stringent and the Commission is expected to enforce it with a strong hand, it is the expectation of drug trade representatives that advertising in such publications as medical journals and technical and scientific magazines will probably not have to be handled with such precaution as will advertising going to the layman. This condition arises from the fact that a physician or a scientist is presumed to know more about subjects in his field, so as not likely to be deceived by too enthusiastic ads. However, this does not mean that ads that are palpably false or fraudulent such as one going to physicians, for example, that certain aspirin tablets contain 5 grains when as a matter of fact they only contain 3 grains, could get by.

Under the new law, the Commission can proceed against false advertisers either on the ground that they are practicing unfair methods of competitor or that they are engaged in unfair or deceptive acts or practices against the public. Within a month or so new complaints are expected to be issued by the Commission which will point the way to its policy and program under the new law. A period of several weeks is required for the Commission to put through a complaint after investigation and consideration of the material submitted to it by members of its staff.

Meanwhile handling of false advertising cases was expected to continue under the same general plan followed for a period of years. The Special Board of the Commission, headed by E. J. Adams, has handled thousands of these cases under which objectionable advertising has been stopped by stipulations between the Commission and the respondents in the various majority of instances.

The minority of false advertising cases referred by the Special Board to members of the Commission are handled by James A. Horton, Chief Examiner on the Commission's staff. He investigates and reports to members of the Commission. If the latter think a formal complaint is warranted by the facts, such complaint is issued and assigned for hearing to a trial examiner under the general supervision of the Chief Examiner. At these hearings the Commission is represented by a trial attorney, who submits evidence, calls witnesses and cross-examines witnesses produced by the respondent. After all the evidence is in, the trial examiner reports to the Commission itself for consideration the facts and the law. The latter takes appropriate action, often in the form of cease and desist orders requiring the respondent to stop unfair methods of competition. This procedure will be expanded under the new law to cover also cases of unfair or deceptive acts or practices.

The Federal Trade Commission is presided over this year by Chairman Garland S. Ferguson, Jr., a North Carolinian who was first appointed to the Commission by President Coolidge in 1927. Mr. Ferguson has served continuously since then. Under the Commission's rules, the chairmanship is rotated annually.

The problem of dealing with false advertising under the new law is understood to have been referred to Commissioner Robert E. Freer for handling in detail. His conclusions and recommendations, of course, are subject to consideration and approval or disapproval by other members of the Commission. Actions on this subject, therefore, becomes those of the full Commission, albeit perhaps by majority vote only.

Commissioner Freer is not unknown to the drug and cosmetic trades. It will be recalled that he presided over trade practice conferences of the cosmetic industry. The trade practice rules discussed on such occasions, incidentally, are still pending before the Commission. The disposition to be made of such problems as push money and the use of hidden demonstrators, is still undetermined by the Commission, largely because of disagreement within the ranks of the industry concerning these matters.

Commissioner Freer was appointed to the Commission in 1935. He is an Ohioan, hailing from Cincinnati, and holds degrees from Ohio State University, George Washington University, Cincinnati Law School, Washington College of Law. He served in France in the World War from 1918-19 with the 324th Machine Gun Battalion and was a Major of Infantry in the Ohio National Guard and Officers Reserve Corp. until 1935.

He engaged in the practice of law in Cincinnati until the latter year and later served as attorney in the Bureau of Valuation of the Interstate Commerce Commission, as research assistant and attorney with the Federal Coordinator of Transportation, as special counsel for the U. S. Senate Committee on Interstate Commerce. Meanwhile for a number of years he has lectured on various law and economic subjects in Cincinnati and Washington.

Major Freer has tackled many other important assignments for the Commission and is not alarmed over difficulties involved in cracking the hard "advertising nut" just handed to him by his colleagues. Disciple of the strenuous life, he is modest withal, and regards his new assignment merely as all in the day's work.

So before long this industry will probably become better acquainted with Major Freer as he begins real activity under the new law. It will be some time before the manufacturers and Commissioner Freer know just what is right or wrong under the law. However, the Commissioner will probably test the law with several cases involving several different points.

DR. E. FULLERTON COOK
Chairman of U. S. P. Revision Committee

THE U. S. P.

Once more the "fat is in the fire" over the U. S. Pharmacopoeia. The manufacturers are not getting the cooperation from the U. S. P. Revision Committee they believed they were going to get when the plan of an annual supplement was decided upon. The many errors constantly being discovered in the monographs of the U. S. P. must be corrected promptly and notice of the change should be directed to everyone who has a Pharmacopoeia.

It will be recalled that the U. S. P. Revision Committee planned to issue annual supplements starting with January 1, 1937. These supplements were to become official six months after they were issued. Because of delay occasioned by a change in the Board of Trustees of the U. S. Pharmacopoeia, the first supplement was not issued until the middle of 1937 and did not become official until December 1, 1937. Here a full half year was lost, and during that time many more monographs that needed correction were discovered.

Beyond that nothing was done toward continuing the annual supplements. There are no plans known regarding any supplement for this year. Apparently this scheme has been abandoned, and manufacturers are wondering how the thing is going to be straightened out. Individual corrected monographs might be issued, but these are not apt to be received by all those who should have, and they might be lost. The idea of an annual supplement was to prevent this sort of thing. Everyone having a Pharmacopoeia would know that annual supplements were issued, and then it would be up to him to obtain these as they came out and then to consult them every time he checked up a monograph in the Pharmacopoeia.

The real reason why this plan has been abandoned has not been told. However, there was some objection on the part of those interested in retail pharmacists and the laws concerning them. In the first place it was thought that the retail pharmacist should not be required to pay one dollar per year for supplements when he had paid five dollars for the original book. Further, in states having laws requiring all retail pharmacists to have a copy of the U. S. Pharmacopoeia, it would be necessary for the State Board of Pharmacy to check each retailer each year to be certain that he had his annual supplement.

But this viewpoint on the matter is quite ridiculous. In the first place, the changes requested in the Pharmacopoeia are practically all discovered by the scientists of the manufacturing or importing houses, and it is merely manufacturers and importers to whom these changes are important. Further, if a retail druggist cannot pay one dollar a year for supplement, it is doubtful that he should remain in business.

The difficulty with ordinary interim revisions of the monographs of the Pharmacopoeia sent out one at a time is that people having a Pharmacopoeia are too apt not to know about them, or are too apt not to send for them even if they do know of them. Further than this, these people have no way of keeping them in any orderly arrangement, and they might loose them, or might forget what ones had been issued. With a yearly supplement practically all of these difficulties are eliminated. Under the contingencies surrounding the individual interim revisions, it is doubtful that either a manufacturer or the Food and Drug Administration could base a case upon these single sheets, whereas they could base a case upon a yearly supplement with which every owner of a Pharmacopoeia should be acquainted.

The Combined Contact Committee of the American Drug Manufacturers' Association and the American

AGAIN IN DISPUTE

Pharmaceutical Manufacturers' Association were responsible for the working out of the yearly supplement plan which the Revision Committee has now apparently abandoned. Naturally, after so much effort upon the part of the Contact Committee to bring about this satisfactory state of cooperative effort between the Contact Committee and the Revision Committee, the Contact Committee does not feel very happy about the abandonment of the plan.

Following a meeting of the Contact Committee held March 28 and 29, a statement was issued in which the Contact Committee expressed "its regret that the U. S. P. Committee of Revision has not continued its policy of bringing out in published form annual supplements to the United States Pharmacopoeia. The large number of changes already made in the text of the originally official volume, and the large number of further changes contemplated, lead to great confusion and make it very difficult for industry, officials, and all who are required by law to adhere to the standards set up by the U. S. P. to know from day to day just what these standards are. Much of the difficulty involved in the importation of drugs is undoubtedly due to lack of knowledge by exporters in foreign countries of the latest official text. Furthermore the legality of changes in standards which have not been adequately publicized is seriously questioned."

Following this statement, the Contact Committee has the following resolution:

"Be it therefore resolved:—That the Contact Committee of the American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association reaffirm its approval, and offer of cooperative support, of the principle of annual interim revisions of the United States Pharmacopoeia, and, further, that all changes and corrections subsequent to the First Supplement be collected into proof sheets for review and criticism, to the end that a second Supplement may be made official as promptly as the annual interim revision program permits.

"Further, That the Contact Committee is not concerned about the actual form of the revisions, be they either reprinted monographs similar to the First Supplement or simply correction sheets so long as they carry notices of the dates on which they become official.

"Further, That the absence of a definite and uniform system of notification of changes in texts in the National Formulary adds to the confusion mentioned above. The plan of issuing annual supplements has not been adopted or suggested by the Committee of the N. F.

"Therefore, Be it further resolved:—That the Combined Contact Committee of the American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association direct the attention of the Committee of Revision of the National Formulary to the following request:—

"In order that the purchaser of the National Formulary may be adequately, promptly, and correctly informed of revisions and corrections in the text when such changes are accomplished, it is recommended that the N. F. Revision Committee provide for the proper dissemination of revisions by issuing dated supplements arranged in suitable and convenient form, permitting the registered subscriber to bring the latest Revision of the Formulary up to date. Further, it is suggested that the cost of the necessary supplements be provided for in the original cost of future decennial revisions.

"In conclusion, we would suggest to the U. S. P. Revision Committee that they also consider a plan of registration of purchasers of the U. S. P. and the sub-

sequent automatic supplying them with all corrections and supplements.

"Because of the present status of Aloes, the Combined Contact Committee has been studying the specifications for Aloes as they appear in the U. S. P. Monograph, as a result of numerous opinions and findings accumulated and tabulated during the investigation as well as two series of cooperative assays upon moisture, and alcohol insoluble fractions, the following partial revision of present official standards is recommended:—

"1. The erroneous page reference in line 9 of the monograph be corrected.

"2. The maximum moisture limit be increased to 12 per cent.

"3. The second identity test be restricted to a color test with the quantitative water soluble determination deleted.

"4. The word "deep" qualifying "rose color" in the fifth paragraph under identity tests be deleted.

"5. The test for purity (alcohol insoluble portion) be placed on a quantitative basis by a standard recommended method, with a high limit of ten per cent. alcohol insoluble.

"6. The question of the application of the blanket acid insoluble ash standard to aloe be clarified.

"It is recommended to the U. S. P. Revision Committee that the present U. S. P. method for Assay of Methylene Blue be deleted and that the perchlorate method be made official, a long cooperative study of this method which was reported showing it to be much more accurate.

"By resolution, the Combined Contact Committee method for the Assay of Ephedrine Salts is submitted to the U. S. P. Revision Committee for study and recommended adoption in a future revision.

"The Contact Committee again reiterated its stand that the Digitalis situation is becoming more acute and that the requirements for importation is moisture-proof containers be deleted.

"The Committee is recommending to the N. F. Committee of Revision changes in the present assay of Acetylsalicylic Acid Tablets to insure more uniform and accurate results. Also a request was made that Cape Aloes be made official in this text.

"As a result of cooperative investigation, the Committee has devised a satisfactory method for the estimation of Sulfanilamide in Tablets of Sulfanilamide and suggested suitable tolerances for same."

What is in the minds of those responsible for the Pharmacopoeia that should cause them to abandon a plan so well conceived and executed? The plan was obviously to the advantage of all concerned. Certainly the Pharmacopoeia itself was to be kept up to date which seems essential in these days of rapid scientific progress. Further, it was a means of correcting errors which are always present in the Pharmacopoeia, but which sometimes are only uncovered when intense work is done on a product which happens to rise to a place of greater importance for one reason or another. Certainly, a Pharmacopoeia cannot be expected to remain static for a ten year period any longer. Neither can errors be changed and be doubtfully publicized. Under the proposed new Food and Drugs Act, the Food and Drug Administration will have the right to change the standard if the Revision Committee does not do it in a reasonable time after the Food and Drug Administration directs attention to the necessity of a change.

Such a power will be all that the Food and Drug Administration will need to put in government hands all the making of standards for drug products if the Revision Committees of the U. S. P. and N. F. do not do their work promptly and properly publicize such interim revisions as they might make.

The manufacturers are strong for a continuation of the plan as it will let them know just where they stand. Furthermore, it will make it possible for manufacturers to have improved methods of assay immediately put into the Pharmacopoeia. This would be a great incentive to the scientific staffs of manufacturing to increase their research efforts along these lines and publish their findings. Certainly if the results of their labors might be promptly included in the Pharmacopoeia, these scientists would have some object for doing their work.

There appears no valid reason why the Food and Drug Administration should not be pleased with the annual supplement method of revision. Certainly these officials have had their headaches in turning down pure and authentic products for import because these products did not comply with the tests set forth in the Pharmacopoeia. The fact of the matter in these cases was that the standards could never have been met by pure products, yet the mistakes had persisted in more than one revision of the U. S. P.

The National Formulary has never had the annual supplement method of revision in force, but if the U. S. P. had continued this method, it is likely that the N. F. would have adopted it. Now with the U. S. P. abandoning the method of annual supplements, it is not so likely that the N. F. will undertake it. However, one cannot tell about this.

The importers have been particularly disturbed about the delay in interim revisions, because of the difficulty of importing goods which are proper in every respect. The cases of bitter almond oil and aloes are still fresh in the memory of importers as well as manufacturers using these products. If the importers and manufacturers cannot be certain of real cooperation in the matter of interim revisions by the Revision Committee, they will probably again consider the likelihood of moving to place the setting of standards in the government.

What will happen in the future no one can foretell. The Contact Committee is apparently of the opinion that the Pharmacopoeia has run out on them after the plan had been agreed upon and inaugurated. How to make the Pharmacopoeia see the light of reason is the problem before the industry.

MOROCCAN ESSENTIAL OILS

PART II

By DR. ERNEST GUENTHER*

DURING the years prior to my recent investigation of Moroccan essential oils, I had been a frequent visitor to Spain. There I witnessed the gradually approaching catastrophe, made inevitable by the greed of the big Spanish landowners and the growing discontent among the impoverished Spanish rural population. Political agitation in every village finally made distillation in Spain extremely difficult and relatively costly. One could not blame the Spanish peasant and rural laborer for demanding higher wages in an economic system which was gradually emerging from the medieval into a more modern and industrialized economy. While these conditions were disturbing to Spanish essential oil production, they provided impetus and added incentive to production in Morocco. Morocco, too, is equally well suited for the production of these essential oils which, by their application in low priced products, such as soaps and disinfectants, must necessarily remain cheap, unless the oils themselves be replaced altogether by products of our modern synthetic industry.

Morocco possesses a distinct advantage in its large population of Berbers, who provide low cost labor, entirely congenial to the trying conditions under which they have to work. A mysterious people, these Berbers! Probably of Nordic origin, and inhabiting the northern ranges of the Riff mountains for thousands of years—perhaps before the rise of Carthage and Rome—these tall, blond, blue-eyed shepherds and warrior forebears staved off the repeated invasions of Phoenicians, Romans, Arabs and Spaniards. In the South, they intermingled with the more swarthy complexioned, fierce and cruel warriors of the Great Sahara—the Arabian tribesmen. Of such is the Berber stock. Their habits, despite the conquest of France, have remained nomadic and the great task for the Moroccan Administration has been to harmonize their ancient, restless, roaming habits with a higher standard of hygiene and life in general. The government established a cordon of sanitation, in an endeavor to protect and control Morocco from tribesmen continuously filtering in from the Southern Sahara. One encounters pitiful figures on the far-stretched highways leading toward the South—ragged wanderers emerging from the Sahara in quest of a livelihood in the more civilized North. No longer are they permitted to live as marauding bandits of the desert, yet civilization does not compensate them with a secure livelihood. Sanitary stations on the great highways stop these "broken hoboes" of the Sahara. They are disinfected, fed and sent back to the Southern Sahara where, bewildered, they do not know how to adjust old habits of robbery and warfare with the strange European conception of civilization.

It is really a fascinating experience to witness the eagerness with which the Berbers have taken to Morocco's new industry. To them it is an art in which they strive to surpass one another. The Berbers if properly understood and handled are a marvelous race; proud, honest, intelligent, hardworking and quite unmindful of those hardships which a white man could not possibly endure. To march forty or more miles a day in the burning sun, with only a handful of dates for sustenance, to sleep in a primitive tent made of a few old skins means nothing to a Berber and he will be perfectly happy as long as he feels he is free to move about.

My friend, Mr. Chalureau—a leading figure in the development of Moroccan essential oils, has been most successful in molding these tribesmen into this growing venture. He pays them salaries which, while far below European standards, are still highly attractive to the Berbers. For sleeping quarters he provides them with modern army tents set up near the migratory still, or a group of tents presumably a tribal encampment. While the men attend the stills, the women and children go out into the mountains, cut the plant material and carry it in sacks on their backs for twenty or more miles without complaint. One large tent might be sufficient for the working crew (and their families) of a single still. More important producing regions will demand the setting up of several stills and a small tent village with the foreman of the distillation post being elected "Chief" of the newly-formed tribe. If conditions necessitate the estab-

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lishing of permanent, large distilleries, "kasbahs" or native villages may be built nearby, behind the walls of which one or two hundred native families can live according to their customs.

Thus, inherent traditions do not conflict with this "unemployment relief" for the Berber tribes which in many sections have been uprooted by French conquest. Migratory distillation in their own native surroundings appeals much more to them than life in sordid industrial centers to which they could never become accustomed.

A native distiller is satisfied to work for 10 francs per day; a woman collecting the plant material in the hills and transporting it twenty miles or more is content to make 6 francs daily. The erecting of a large army tent costs a few hundred francs and the building of a "kasbah" is done entirely by the natives.

This brief discussion of Morocco's natural advantages will enable the user of essential oils to appreciate more fully the possibilities inherent in this fascinating new development in Northern Africa.

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OIL OF PENNYROYAL—(In Berber Language *fliliou*). The plant so far has been distilled almost exclusively in southern Spain, especially in the provinces of Cadiz, Huelva and Cordoba, but Morocco, it appears, offers great possibilities for production of this oil. Mentha pulegium L. var. eriantha grows densely and spontaneously on large expanses in the same regions as origanum. It is a perennial plant preferring fertile, not too humid soil. There are several regions in the Riff Mountains and in the Medium Atlas where pennyroyal, origanum and myrtle grow, but never side by side; always separately on different hillsides, pennyroyal being more abundant than either origanum or myrtle. Very large quantities of pennyroyal could be produced on condition that sufficient stills are provided.

The same stills serve for the distillation of pennyroyal, origanum and myrtle. When switching from one plant variety to another, the stills must be cleaned by boiling with ashes and rinsing the condensers with a hot soap solution.

The harvest of pennyroyal takes place from middle May to the beginning of September. If only flowers without stalks are distilled, distillation lasts about two hours and 100 to 120 kilos of flowers may be charged into one still. According to region and season, yield of oil varies between 1.25 and 2 per cent.

Three lots of oil of pennyroyal analyzed in our laboratories showed the following properties:

Oil of Pennyroyal	*Specific Gravity at 15°C.*	*Optical Rotation*	*Refractive Index at 20° C.*	*Solubility at 20° C.*	*Pulegone Content*
Distilled on July 15, 1936 near Mekñes, for about 3½ hrs., from dried flowers only.	0.945	+22°55′	1.4872	Turbid in 4.5 vol. and more of 60% alcohol; soluble in 1.5 vol. of 70% with opalescence; opalescent with more.	89.0%
Distilled in the southern Riff on Aug. 12, 1937, for 2½ hrs., from dried flowers only.	0.941	+20°28′	1.4875	Soluble in 4 vol. and more of 60% alcohol; soluble in 1.5 vol. of 70% alcohol and more.	97.0%
Distilled in the southern Riff in Sept., 1937, from dried flowers.	0.947	+21°20′	1.4880	Slightly hazy in 5 vol. and more of 60% alcohol.	93.0%

The high pulegone content of the second oil is quite extraordinary and above the limits given by Gildemeister and Hoffmann.

The good quality of the oils, together with the large quantities of plant material available, places Morocco in a very competitive position.

Oil of Rosemary—(In Berber Language *azir*).

Quite some years ago, rosemary oil was produced in southern France. Before the World War, Dalmatia became a principal factor in regard to this oil because of lower labor cost and generally more favorable conditions. The outbreak of the World War caused production of rosemary oil to shift again, this time to neutral

At lower left of opposite page is shown migratory still field distillation; alongside of this are shown the Souks, old native quarters. In the lower left corner of this page is shown a rock dwelling in Atlas Mountains; above this is a lone monument on a battlefield; and at the right are shown cedar trees on high Atlas Mountain.

Spain which country within a few years assumed the leading role, producing yearly around 100,000 kilos during the last fifteen years. Only the present Spanish civil war is forcing Spain from her dominating position.

Morocco, with its similar climate, offers good possibilities. Rosmarinus officinalis, N. O. Labiatae, grows wild in the eastern section of Morocco on the left side of the Muluya River, its principal centers being Midelt and Debdu. Distillation can be carried out all year round and very large quantities of oil produced, but it is somewhat handicapped by lack of water in certain regions and becomes possible only in those parts where sufficient water is available.

The plant material growing there is almost inexhaustible. At present the entire plants are distilled, just as in Spain. Distillation of one batch in Morocco lasts about three and one-half hours with a yield of oil ranging from 0.3 to 0.4 per cent.

An oil distilled in eastern Morocco, south of the High Atlas, in February, 1937, from the entire plants showed the following properties:

Specific Gravity at 25° C:	0.905
Optical Rotation:	+0°14′
Refractive Index at 20° C:	1.4690
Solubility at 25° C:	Soluble in 1.5 volumes of 80% alcohol, turbid in 10 volumes.
Total Borneol Content:	10.3%
Ester Content:	1.6%

This oil does not quite comply with the requirements of the *United States Pharmacopoeia*, Eleventh Edition. This, however, is not very important because the Pharmacopoeial requirements are not always met even by Spanish oils, in regard to solubility in 80 per cent

alcohol as well as ester content. It might be interesting to note in this connection that the requirements of previous editions of the *United States Pharmacopoeia* were based entirely on Dalmatian rosemary oil because then it was distilled almost exclusively in Dalmatia. It is also noteworthy that in Dalmatia only leaves are distilled after separation from the branches. In Spain, on the other hand, the entire plant material is distilled (leaves plus stalks) which fact undoubtedly influences the constants of the oil. Former editions of the *United States Pharmacopoeia* specified dextro-rotation while most Spanish oils show laevo-rotation. Since the bulk of rosemary oil during the past fifteen or eighteen years has been produced in Spain, the *United States Pharmacopoeia*, Eleventh Edition, was modified, taking into account the properties of Spanish oils. The sample mentioned is similar to the Spanish type although it does not entirely meet the requirements of the *United States Pharmacopoeia*, Eleventh Edition. However, even most of the pure Spanish oils act similarly, and a further slight modification of the *United States Pharmacopoeia* in regard to solubility is desirable.

Solubility of rosemary oil seems also to be influenced by sunlight, plants from slopes with southern exposure or plants distilled in summer giving more soluble oils.

We have mentioned that in Dalmatia rosemary oil is distilled exclusively from the leaves, which fact makes the oils finer in flavor, less turpentine-like. Thus the Dalmatian oils can be used in sausages and general flavor work, replacing imported rosemary leaves. In Morocco, with its low labor costs, it is also possible to distill only leaf material after separation from the stalks. This seems to promise a new market for Moroccan rosemary oil. However, according to the writer's knowledge, this experiment has not yet been carried out in Morocco but will probably be attempted in the near future.

Oil of Myrtle—(In Berber Language *rihan*).

Myrtus communis L. grows most abundantly on sunny mountain slopes in practically all of the countries bordering the Mediterranean; in Morocco very profusely on the hill slopes of the Riff Mountains. The plant is an evergreen which can be distilled throughout the year. Main centers of production in Morocco are Ouezzane, Terroual and Zoumi. Only leaves and fruit are distilled.

One hundred twenty to one hundred fifty kilos of plant material are charged into the still. Distillation lasts about two hours and yields 0.2 to 0.25 per cent. of oil, depending upon the degree of humidity. Outside of Morocco the oil has been distilled until now in southern France (Esterel Mountains), in Corsica and especially in Spain. Distillation of one batch in those countries lasts from five to eight hours.

The Moroccan oil has a very fine odor and flavor, and being a very powerful oil, should be considered for much wider application. Morocco could produce very large quantities. Two samples analyzed in our laboratories showed the following properties:

Oil of Myrtle	*Specific Gravity at 15° C*	*Optical Rotation*	*Refractive Index at 20° C.*	*Saponification Value*	*Solubility at 20° C.*
Distilled in the Riff Mts. on Aug. 12, 1937 from leaves only for 2 hrs.	0.912	+24°40′	1.4669	58.8	Hazy in 4.5 vol. of 80% alcohol, almost clear in 10 vol.
Distilled in the Medium Atlas on June 15, 1937 for 2½ hrs. from leaves only.	0.900	+24°40′	1.4671	49.5	Soluble in 7 vol. and more of 80% alcohol.

The properties resemble those of the Spanish and Algerian oils.

Oil of Rue—(In Berber Language *fijel*).

The oil has been produced up to now in Spain and Algeria but Morocco offers good possibilities, the plant growing in large quantities in the Medium Atlas and in some parts of the Riff, in altitudes of from 600 to 1000 meters. The oil can be distilled from green plants from the middle of June to the beginning of September when the plants go into seed. The best distillation material consists of the tops of green plants which are cut off about the end of August when the seed has just developed. The leaves at the base of the plant, too, may be distilled because they contain essential oil, but the stalks are eliminated as valueless. The yield of oil according to period of harvest and maturity varies between 0.75 and 1.2 per cent. Oil of rue distilled for three hours on June 30, 1937 in the Medium Atlas, from the entire plants when leaves and seeds were not yet matured, was analyzed in our laboratory:

Specific Gravity at 15° C:	0.833
Optical Rotation:	+0°22′
Refractive Index at 20° C:	1.4301
Ketone Content:	96.0%
Solubility at 20° C:	Soluble in 2 to 2.5 volumes and more of 70% alcohol.
Congealing Point:	+10.4° C.

The properties are normal. Interesting is the high percentage of ketones and the relatively elevated con-

On the opposite page is shown an old fashioned olive oil mill in a field. Below on this page is shown a view of Fez, the capital of Morocco. And at the right is a view of modern Morocco—Casablanca.

gealing point indicating a large percentage of methyl nonyl ketone, the main constituent.

Five tons of rue oil could be produced annually in Morocco without much difficulty.

Oil of Fennel—(In Berber Language *besbes*).

Foeniculum vulgare Mill. grows wild in Morocco in all regions where pennyroyal grows, especially on the great plains between the Sebou and Defale Rivers. Since sheep eat the plants, only limited quantities of oil can be produced—four to five tons yearly. The plant material is distilled during period of seed formation. The yield is then about 0.7 per cent., length of distillation one and one-half hours to two hours, charge per still 100 kilos and period of distillation July. An oil distilled from such plant material is far superior to oils distilled from the green plant containing no seed. In the latter case the yield is about 0.5 per cent., length of distillation one and one-half hours to two hours, charge per still 100 kilos, and period of distillation June. At that time the seed has not yet developed and the oils obtained from this green plant material contain very little anethol. Such oils resemble in their properties oils of wild growing bitter fennel produced in Spain and Algeria. Such an oil analyzed in our laboratories showed the following properties:

Oil of fennel distilled two and one-half hours on March 30, 1937, in the Medium Atlas from stalks, flowers and leaves—

Specific Gravity at 25° C:	0.879
Optical Rotation:	+57°50′
Refractive Index at 20° C:	1.4689
Solubility at 25° C:	Not clearly soluble in 80% alcohol up to 10 volumes; soluble in 0.5 volumes and more of 90% alcohol.

Apparently the oil does not congeal when cooled to —20° C. which indicates absence of anethol. The phellandrene reaction of the oil is strongly positive.

From this it appears that in future it will be preferable to distill fennel oils exclusively from riper plant material after it has gone into seed.

* * *

The oils described above have been produced in Morocco partly in commercial quantities, partly only experimentally. There are other aromatic plants which could be or are already being exploited, distilled or extracted. We mention only the oak moss (mousse de chêne) which grows on oaks in the forests of the Medium Atlas and which is of good quality unless mixed with cedar or other mosses (mousse d'arbre) growing on other trees of the Atlas, especially cedar trees.

Considerable quantities of labdanum grow between the towns of Taza and Tainest (30 kilometers north of Taza). It is interesting to note that the Berber women take labdanum seed internally as an aphrodisiac.

The plains and valleys between the Medium and High Atlas are covered with very large quantities of a salvia variety which in some ways resembles our American sage growing on the plains of Utah. Enormous quantities of oil could be distilled, but no experiments have been made so far.

KNOWLEDGE

VITAMINS AND ANEMIAS

ANEMIA, deficiency in the quality and quantity of the blood, is not a disease. The term is used in reference to a number of pathologic conditions which may be due to a variety of causes, and manifest themselves in many different forms. Pallor, one of the most striking symptoms, is, in itself, not adequate evidence of anemia, and it is only by examinations of the blood that the existence of anemia may be established, and that the different forms of anemia can be distinguished with any degree of certainty. Of great importance is the fact that the different forms of anemia require fundamentally different treatment.

Nutritional anemia is extremely common. In 1931, MacKay's studies of infant feeding in the poor sections of London disclosed the fact that only ten per cent. of the artifically fed and sixteen per cent of the brest fed infants had hemoglobin values of eighty per cent. or more. This type of anemia is often found among laboratory animals which have been placed on deficiency diets. Children with this type of anemia often improve spontaneously as they grow older and eat an increasing variety of foods. Deficiency diseases most commonly associated with anemia in man are rickets, pellagra, sprue and scurvy, and consequently the possible role of the vitamins in blood regeneration has been extensively investigated.

Investigations of experimental anemia have given conflicting and confusing results. The development of anemia following a synthetic diet deficient in but one factor is not in itself considered adequate evidence, and hematologists today demand that the administration of the factor in question produce prompt correction of the anemia, and that there be also definite evidence of regeneration of the blood corpuscles. By such standards only vitamin C seems to be essential to regeneration of the corpuscles.

Hemoglobin values as low as thirty per cent and red corpuscle counts as low as two million are frequently observed in cases of human scurvy. In infantile scurvy anemia is usually, but no invariably, present, and is usually cured by the administration of vitamin C. This type of anemia (normocytic) does not respond to the administration of iron preparations. Anemia has been reported in subclinical scurvy, and this suggests that anemia attends vitamin C deficiency with fair frequency.

Vitamin C, however, is probably not the only factor which plays a part in the maintenance of normal blood values, for there is evidence that other factors in food are active in the regeneration of blood. In 1935, J. L. Kyer obtained a factor from dried yeast, which was not vitamin B or vitamin G, which promptly corrected milk anemia in rats. In children, a greater recovery from anemia has been observed when they are fed a supplement of cereal embryo. Many of the results reported appear to involve the vitamin B complex, and it is possible, of course, that the factors involved were effective in some cases by improving assimilation rather than by any direct effect on the blood-forming organs. In many cases of the common iron deficiency anemia, relapse is often observed when the administrations of iron compounds are discontinued, in spite of diets containing adequate quantities of iron. This suggests the probability that in many of the cases of this type of anemia the determining factor is faulty assimilation rather than inadequate iron intake.

Over a decade ago several investigators suggested the probability that pernicious anemia was a deficiency dis-

OF VITAMINS

Although only one vitamin—vitamin C—has been definitely demonstrated to be essential to regeneration of blood corpuscles, it is probable that other vitamins are involved, directly or indirectly, with blood regeneration mechanisms.

By A. RICHARD BLISS, Jr.

order. The exact factor in liver which is effective in pernicious anemia has not been identified or isolated. However, so-called tropical pernicious anemia which manifests itself after a deficient diet may be cured or prevented by the administration of yeast. The condition has been produced in monkeys and in rats, and may be prevented or cured by yeast in these animals. Here, then, is an anemia similar to pernicious anemia which may be developed by a deficient diet and cured or prevented by some factor or factors in yeast by doses so small as to strongly suggest that some accessory food factor or vitamin is the effective agent.

It should be pointed out that pernicious anemia is not primarily an anemia, and that the anemic stage is preceded by a stage which closely resembles vitamin B complex deficiency. Sore tongue and mouth, diarrhea and, at times, neurological manifestations are the major pre-anemia symptoms, and the administration of yeast will apparently cure the early stages of the condition. Pernicious anemia, pellagra and sprue, the last two being established deficiency diseases, present many common characteristics, which include lesions of the mouth and intestines. Pellagra and pernicious anemia both show similar lesions of the nerve system. In pernicious anemia and sprue the lesions of the bone marrow are practically identical. Although usually less severe in pellagra, all three conditions manifest prominent anemias.

The "intrinsic" factor which is involved in the development of the anemia of pernicious anemia is at times absent in sprue also; it is present in pellagra, but sometimes absent in tropical pernicious anemia. Russell and Dalldorf and Connery and Goldwater demonstrated that the lack of intrinsic factor in pernicious anemia is not absolute, because yeast administrations will produce a moderate reticuloxytosis in many cases of pernicious anemia. Furthermore, the "extrinsic" factor which when activated by "intrinsic" substance induces remissions in pernicious anemia, is constantly associated with the vitamin B complex; and liver extracts of high potency in pernicious anemia are also more effective than yeast in tropical pernicious anemia and pellagra. As with pellagra, all cases of pernicious anemia do not have a common cause.

Pernicious anemia is looked upon as a "conditioned" deficiency; that is, a deficiency conditioned by an abnormal stomach. The destruction or removal of the stomach may produce a deficiency of intrinsic factor and pernicious anemia. It is quite possible that pernicious anemia characterizes the late stage of a deficiency disease in which the gastric insufficiency has become intractable.

It seems plausible to assume that a number of dietary factors are involved in these diseases, and that different pathological effects may follow their deficiency singly or collectively, or that the results may be influenced by variable conditions within the body, such as lesions of the gastro-intestinal tract which may influence absorption. Until identification of these dietary factors takes place, it may be assumed that pernicious anemia, so-called tropical pernicious anemia, pellagra, and sprue constitute a group of diseases related to the vitamin B complex. In spite of the lack of proof that vitamins other than vitamin C and probably the vitamin B complex are involved in blood regeneration, it seems reasonable to suppose that other vitamins are active, directly or indirectly, in the regeneration of the blood corpuscles.

RAW MATERIALS USED

In the formulation of a lipstick, it is necessary to bear several important factors in mind, the most important being the physical appearance and consistency of the finished product as well as the possible changes that may take place in the stick on standing. The first two factors mentioned are relatively easily achieved but the second group may be determined only after careful experiment with the ingredients involved. A man with a good eye for color can easily develop the shade wanted, a proper knowledge of the raw materials used would allow one to attain the desired luster, the proper consistency may also be easily arrived at as well as the proper "spread" but at the end of six months the stick which looked so good does not always look the same. I shall not attempt to explain how the best stick may be made, for ideas as to what constitutes a good lipstick are not the same. I think, however, that a discussion of the properties of the raw materials used would be beneficial to the compounder.

The materials used in lipstick manufacture are many and varied. They run the whole gamut of the non-drying oils, fats and waxes as well as a great many synthetic materials which are available on the market. The colors are also varied consisting of lakes, toners and fluorescein derivatives. In this great assortment one may find materials for any purpose needed, but very few will stand the test of time.

Castor oil, probably the most common substance in a lipstick, is very peculiar in its properties. It is a thick, viscous oil and its use in large quantities would tend to give a stick leaving a thick film on application. It is probably the most stable of the vegetable and animal oils. Indeed, by itself it may stand exposed for years without any noticeable change in either its physical properties or its chemical structure taking place. Because of the presence of the hydroxy-group in ricinoleic acid (the essential ingredient of custom oil being the glyceride of ricinoleic acid) it is unique as an oil. The presence of the hydroxy group also makes castor oil the best natural solvent among oils, fats and waxes for the bromo acids and, therefore, its great use. It is miscible with all other animal and vegetable oils and all waxes (true waxes of the ester type as differentiated from hydrocarbons) but only very slightly miscible with mineral oils and other hydrocarbons. If castor oil is used it is best to avoid the addition of hydrocarbons for this reason, but their admixture in small percentages is not harmful.

Castor oil, if bromo acids are added, will become rancid upon standing, however, and that is the drawback. Its continued use is due to the fact that no better solvent for the bromo acids has appeared on the market until recently and also to the inertia the cosmetic manufacturer as a rule exhibits towards any change. The rancid odor is usually overcome by the addition of large amounts of perfume to hide the odor and little has been done to overcome the condition. Some new materials have appeared on the market which have some merit but their close investigation is necessary before their adoption is made. Butyl stearate, or at least the samples I have seen, is a liquid at ordinary temperature and a substance of low viscosity. It is used both as a solvent for the bromo acids which property it has to a certain extent and also as a "cutting" agent for the castor oil. Its use allows the formulation of a stick possessing all the good properties of the castor oil stick but permitting the application of a thinner film. It has, however, the same drawback as castor oil but to a greater degree. A sample of butyl stearate allowed to stand on the shelf by itself will become rancid. This is

IN LIPSTICKS

By H. HILFER

undoubtedly due to the presence of small quantities of unsaturated fatty acids, as impurities, for theoretically a pure butyl stearate should not deteriorate. It has another drawback in being a substance of relatively high vapor tension and in time will evaporate. Sticks containing butyl stearate might, therefore, shrink on standing.

The best solvent for bromo acids are incompatible with an ordinary lipstick base and also far too soluble in water to permit their use. Di-ethylene glycol, for example, contains two hydroxy groups and one ether group causing the substance to have great solvent properties for dyestuffs. However, a substance of this type may be made to form a mono acid ester of a fatty acid causing it to become miscible with the base, and still leave an ether group and a free hydroxy group to allow its use as a good solvent though not as good as the free alcohol. The higher the molecular weight of the fatty acid the less will be its solvent power, for the presence of a long hydrocarbon chain will affect the desirable solvent properties of the ether and hydroxy group. If the fatty acid is too low in molecular weight, however, the ester, though a good solvent, will no longer be miscible in the remainder of the base. (It is important that the fatty acids be saturated. Otherwise, rancidity could still take place.) The presence of short chained fatty acids also has been proven to be harmful to the skin. However, a happy medium may be reached which could be both a good solvent and easily miscible. The example mentioned is one chosen at random to illustrate the point. The esters of di-ethylene glycol are not necessarily the best substances available.

Sesame oil, lard and olive oil have also been used as cutting agents but these also possess the same undesirable characteristics as castor oil as far as rancidity is concerned.

Lanolin, if used judiciously, is one of the finest materials available for the lipstick manufacturer. It enables him to embody a characteristic smoothness almost impossible to obtain without it. It is necessary to use only small amounts for, if large amounts are used, there may possibly be a tendency to absorb moisture after application, which would not do any good since it evidences itself as a white ring.

Beeswax because of its high melting point and amorphous character may be used in any amount desired. It is one substance which can cause no possible bad effects since it does not become rancid nor has it ever been proven toxic. Its use is general because of its good characteristics.

Spermaceti is sometimes used because of a "softness" it gives to the stick. Care must be taken in its use because of the danger of crystallization which may take place. Cetyl alcohol, a derivative of spermaceti, possesses in addition to the characteristics mentioned a definite solvent power for the bromo acids. Both are low melting point substances and, unless the amount is small, likely to crystallize.

Carnauba wax, the highest melting point natural wax available, is used in small percentages to increase the melting point of the stick. Contrary to the general melting point law which says that, if a small addition of another substance is made, there is a decrease in the melting point, carnauba wax, even in as low a proportion as one per cent, causes a very definite rise. It is a stable substance and may be used without any fear of future failure.

Hydrogenated oils enjoy a wide use because they are much more stable than oils such as olive and sesame. They are good materials to use if sufficient care is taken in the heating of the mixture in which they are since

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DEHUMIDIFICATION

By H. H. WATSON

THE drug and allied chemical trades have been leaders in installing equipment for moisture control in many processes. Constant control of humidity is now obtainable for any size of room or any flow of air and low relative humidities may readily be maintained throughout the humid summer season.

In certain processes it may be desirable to increase humidity, but since the demand for dehumidification in this field is so much greater, this discussion will be confined strictly to dehumidification apparatus.

In drying operations, dehumidification must be closely controlled to avoid possible case hardening which might result in dealing with products such as pills or rouge cakes if dried too quickly. Certain tablet granulations and some extracts and biological materials may be dried as rapidly as possible while others require carefully controlled and slow drying. In any case, dehumidification equipment is of recognized value since the optimum rate of drying may be obtained for any product.

Many processes where dehumidification is required must be carried on at comparatively low temperature levels so that a means of drying by dehumidified air at moderate temperatures is invaluable. Manufacturers who do not use dehumidifying equipment with their drying cabinets have undoubtedly experienced conditions during humid summer weather when more moisture was carried into a drying cabinet than was taken out by the circulating fan system.

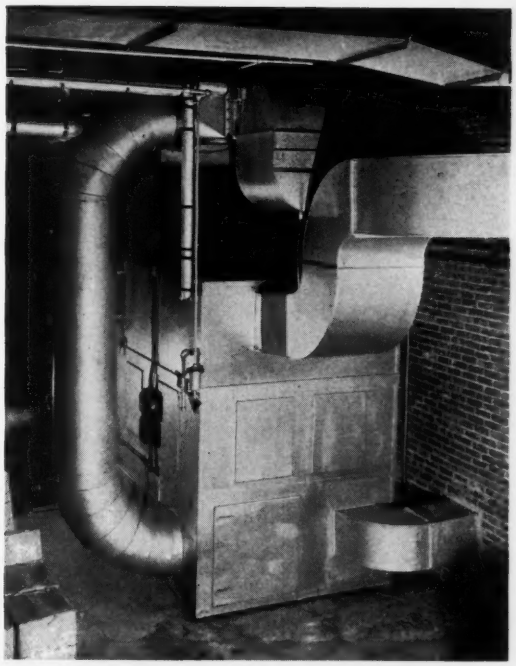
Controlled dehumidification is of marked value in dehumidifying products just to the equilibrium point. Material dried beyond its equilibrium point naturally reabsorbs moisture until equilibrium is reached. On the other hand, material not dehumidified to the desired point will give up moisture to the surrounding air. Reaching the equilibrium point may not be important in many instances, but in products such as pills, rouge cakes, etc., drying just to equilibrium is of greatest value. Those of you who have attempted to manufacture effervescent tablets without dehumidification have undoubtedly experienced difficulties in compressing granulations in summer weather. The granulations will just not flow as desired nor will the tablets release from the punches; and besides the moisture in the air will cause more or less disintegration of the product.

The constant movement of air within drying cabinets prevents equilibrium conditions from being reached at the surface of the products being dried and consequently permits the flow of moisture from the product to the surrounding air. In many plants a variety of products must be dried in the same cabinet so that controlled dehumidification, permitting variations in air flows and moisture contents of the circulating air, is of prime importance.

Three general plans for dehumidification control are in use. First is refrigeration, which is possibly the oldest scheme of moisture removal and which, of course, removes moisture vapor from the air by condensation on cooling coils. This scheme has the disadvantage of not being able to reach the low dewpoints sometimes required and also possibly lowering the temperature level too much with consequent need for re-heating the air. The second plan is an absorption, which involves passing a flow of air through a liquid such as sulphuric acid, lithium chloride solution or through some deliquescent substance such as $CaCl_2$, KOH, P_2O_5 etc. This scheme has the disadvantage of possibly carrying over particles of the absorbent; most of the materials used are corrosive and dangerous to handle; and drying efficiency progressively decreases. In addition the absorbing agent needs regular replacement in most types.

The third and newest scheme involves the use of an inert adsorbing agent such as activated alumina or silica gel. In this type of equipment the moisture is removed by the physical phenomenon of adsorption. This moisture is condensed out in the adsorbing beds and later swept out by a simple reactivating process. Some types of adsorbing equipment deliver a constant flow of air of constant humidity and temperature conditions. The adsorption type of equipment permits the deliver-

At the right is shown an activated alumina dehumidifying unity, while below is shown an air conditioned coating room.



ing of dehumidified air at moderate temperatures without the necessity of re-heating. This type of equipment makes available dehumidification with or without cooling. It is advantageous in that the equipment may be operated with low cost plant steam or gas—and operates year after year with no loss of efficiency.

When used in connection with drying cabinets, the adsorption type apparatus works out especially well as it usually permits operation on a recirculating basis with the whole operation being carried on at the proper temperature level and degree of dryness.

All of the three general types have their proponents and opponents; however, adsorption apparatus like the familiar Pittsburgh Lectrodryer is becoming more generally used and is rapidly replacing equipment of other types.

Have you really stopped to consider just how much moisture may be present in an average room? Take a location in the Middle Atlantic States—say around New York City. In the summer (according to Weather Bureau data) the moisture content of the air reaches a summer "high" average of around 9 grains per cubic foot of air. Under such conditions in an average size tablet room, measuring say 20′ x 10′ x 10′ high, there is over 2½ pounds of water in the air in the room. You may fill containers with "dry" granulations but there is still a lot of "high moisture" air in the container—a certain source of trouble.

In the same room in the winter there will only be about ½ pound of water when the outdoor conditions are at freezing temperatures.

Or consider a drying cabinet operating under conditions as just outlined. For every 1000 cu. ft. of air blown into a drying cabinet as much as 1¼ pounds of water is carried in on humid summer days. Under freezing conditions in the winter this would amount to only ¼ pound or less.

When dehumidifying equipment is used, packaging, processing or storage rooms may readily be kept at lower than normal relative humidities even under the most severe summer weather conditions and drying cabinets may be operated with sufficiently dehumidified air to safely speed up the drying rate.

The majority of dehumidifiers in the drug trade are used in conjunction with tablet rooms where effervescent salts and similar products are handled as it is here that the low relative humidities are of special value. All tablet operations are speeded up in a dehumidifier atmosphere.

But adsorption dehumidifiers can be used in many ways and for many purposes. At the Norwich Pharmacal Co. they have an arrangement whereby one small dehumidifier serves a drying cabinet while a larger unit serves the tablet room. There is branch duct, however, from the large unit so that an extra supply of air can be cut into the drying cabinet whenever needed to help handle larger than usual batches of product, or products containing more moisture than standard. Other dehumidifying units are connected to duct work supplying a small flow of dehumidified air to coating pans giving marked improvement in results.

In another plant, where products are made that are sensitive to both moisture and temperature, combination adsorption—refrigeration equipment is used to control both temperature and humidity. Still another plant packs and handles surgical sutures in dehumidified air. In virtually all plants both in the drug and chemical industries dehumidified compressed air for various drying purposes is of great value. With the adsorption type dehumidifiers, air and various gases can be dehumidified to dewpoints of below minus 60 degrees Centigrade.

The dehumidification apparatus now available offers a means of maintaining year-around dry conditions in your plant or such parts of it as are necessary and if you have a problem of dehumidification it will indeed be worth your while to investigate the available equipment for this purpose.

Lipstick Raw Materials

(*Continued from page 447*)

they may easily crystallize upon cooling. They do not have any marked solvent action but are good "cutting" agents for the castor oil.

The biggest bugaboo for the lipstick manufacturer is the bromo acid used to impart indelibility. There are a great many varieties of these substances but most of them are fluorescein derivatives, obtained by halogenation of the resorcinol rings. The bromos imparting a yellow stain are the di bromo fluoresceins and the usual bromo acids imparting the bluish stain are the tetra bromo derivatives. These two are the most common but, by no means, the only ones used. Iodo derivatives are available as well as the chloro. Their importance is demonstrated by the fact that, in spite of the toxic cases directly attributable to their use, indelible sticks are still very much in demand. Whether this toxicity is due to the bromo acid itself or to some impurities formed during its manufacture is hard to say but it is true that there will be some complaints from users.

In my own experience, I have seen women who suffered a reaction from bromo acids of all manufacturers whose samples were available. It is generally considered that the di bromo fluoresceins seem to be much more harmful than the tetra bromo derivatives and, for this reason, many manufacturers have discarded the di bromo entirely. The argument has also been advanced that the castor oil was really the causative agent since the bromo acid is said to cause some change to take place in it and thus produce a toxic substance, but, in my own study of this question, it is due entirely to the bromo acid and the presence of castor oil has nothing to do with it. In their use the only suggestion I could make is to use as little as possible in the formula.

ALLANTOIN

By M. A. LESSER

THE discovery, or rather the rediscovery of allantoin, is considered one of the most important recent advances in the therapy of ulcers, slow-healing wounds and the like. Allantoin is one of those drugs, which like digitalis from fox-glove in England, and ephedrine from Ma-huang in China, had had empirical use by the peasants of Europe for thousands of years. Peasants who used, and still use, many kinds of concoctions from the root of the common comfrey, did not of course, know that allantoin was the active ingredient of the plant. Yet treatment with this "simple" had, in their hands, often been effectively employed in the cure of internal and external tumors and as a dressing for fresh wounds. Comfrey, at one time or another, had been listed in the ancient pharmacopoeias of Europe. However, the use of the root declined among medical men and its value forgotten by them for more than a century. The farmers and villagers, however still continued to cultivate and use the plant.

The modern history of allantoin, as such, properly begins with the work of Robinson.[1, 2]. In 1912, however, Macalister[3] in England who has used comfrey in the treatment of a severe ulcer, investigated the plant and came to the conclusion that allantoin was the active constituent. He used allantoin successfully in treating other conditions. Macalister's work was, unfortunately, forgotten for twenty-three years. Robinson, who came across the report of this investigation after he had reached his own conclusions as to the value of allantoin, nevertheless willingly concedes priority of discovery to Macalister.

Dr. Robinson, of the Bureau of Entymology of the Department of Agriculture, had been assigned to the study of surgical maggots. Maggots had been introduced into medicine by Baer of Johns Hopkins School of Medicine. As a medical officer with the American Expeditionary Forces in France, he had observed how clean and healthy looking were soldiers' wounds, where maggots of the blow-fly had grown. All the necrotic tissue was gone and small bone splinters were loosened, the insects left only clear, pink, granulating tissue. They would not touch this healthy flesh. Ambrose Pare, the great surgeon of the 17th century had made a similar observation. Surgeons with the Napoleonic armies had also noted the action of these maggots. Baer, however, developed the technique of the use of these larvae in surgery.[4] He achieved remarkable success with his maggot therapy in the treatment of chronic osteomyelitis and other conditions[5]. Reports have shown that maggots are effective in clearing other conditions such as carbuncles, ulcers of the leg, gangrene, soft tissue lesions,[6] infected compound fractures[7] and infected wounds in hemophelia.[8]

Certain obvious disadvantages of this type of therapy instigated investigations as to the actual reasons for its efficiency. Among the undesirable factors of maggot treatment is the natural revulsion of the patient to, and the discomfort of, this insect therapy. Then, too, there is the difficulty of securing a ready supply of sterile maggots, which are quite expensive. The hazards of introducing additional infections is not to be overlooked. The fact that antiseptics cannot be used when maggots are employed is another disadvantage.

When Robinson started his studies, other work had already indicated that the results obtained with maggots were not due to the mechanical removal of the detritus, but that one or more chemical factors was involved. Livingston and Prince,[9] using a filtered extract of maggots, which they referred to as "maggot active principle," plus vaccines, were able to secure about 95% cure in a large series of cases which included fracture infections, amputation stump infections and chronic osteomyelitis. This work proved, fairly conclusively, that the living maggot was not essential in the treatment of many conditions. Robinson's work proved that allantoin was the active substance given off by the blow-fly larvae. As a result of these findings, allantoin was established as a medical agent in 1935.

Both Macalister in 1912 and Robinson, twenty-three years later, working from different angles and ap-

proaches, arrived at the same conclusion, namely that allantoin was an active healing substance. The first found it to be the essential part of the comfrey root, where it is present to the extent of 0.8%. The latter, by experiment and logical eliminations and deductions (he had only one reference to allantoin in therapy when he started[10] proved that allantoin was largely responsible for the healing action of the maggots.

Chemically, allantoin is 5-carbamidohydantoin. The pure form is obtained as prisms, and it is marketed as a white crystalline powder. It is slightly soluble in cold water, but easily dissolved in hot water. It is stable when dry, but is decomposed by alkalis. The crystals of allantoin are bland, odorless, tasteless and do not stain. Although allantoin is widely distributed among plants, the drug is prepared commercially by the oxidation of uric acid with potassium permanganate.

Allantoin is found in the urine of practically all mammals, including man. In humans, it occurs in very small quantities in this fluid excretion. It is the principal end product of purine metabolism.[11] The newer knowledge of the value of allantoin as a cell proliferant indicates that it is probably more than just a waste product of the body. It, and some of its related compounds may be normally present in the cell nucelus.[12] When ingested, allantoin is not decomposed by the stomach. Bethune[13], found no changes in blood coagulation time after oral injestion and intravenous injection of allantoin.

The chief value of allantoin is that it stimulates cell proliferation, that is, it encourages and hastens the formation of cells. As Kaplan[14] points out, "Allantoin has been found to have the same effect on surgical wounds as maggots; namely, the removal of infected material and the stimulation of healing through growth of healthy granulation tissue." Although allantoin has no demonstrable antiseptic action, it is most effective in cleaning up wounds and ulcers. It is believed that the action of allantoin is due to the stimulation of leucocytosis (increase of white blood cells) rather than to any germicidal effect. After a few treatments with allantoin, small areas of pinkish granulation tissue can be seen in the wounds. This is followed later by general development of granulation tissue. This new tissue bleeds easily and resembles healthy tissue. Kaplan expresses pleased surprise at the efficiency of allantoin applications, "The speed with which the necrotic base is converted into granulating area is remarkable. After the first week, the wound assumes the appearance of a healthy granulating ulcer and day by day new islands of granulation tissue can be seen springing up. Pain, which often accompanies these wounds and is a disabling factor, ceases almost immediately with the application of allantoin."

Both Macalister and Robinson employed allantoin solutions. This is still one of the most generally used methods of applying allantoin. Robinson directs that the solution be prepared by adding 2.5 grams of allantoin to 500 cc. of sterile water that has been heated to near the boiling point. Heating is continued until the crystals dissolve, but excess heating must be avoided else the allantoin will break down. Since the allantoin solution cannot be sterilized in the autoclave in the usual manner, aseptic precautions must be observed in its preparation. The solutions should not be allowed to stand for more than a week. They should not be refrigerated, else the allantoin may crystallize out. Room temperature storage, away from sunlight, which also decreases the strength of the fluid, is best. Robinson's method yields a 0.5% solution of allantoin. Since this is very liable to precipitation of the crystals, Kaplan advocates the use of 2 grams of allantoin per 500 cc. of water to yield a 0.4% preparation. This stands up better and is the strength most generally advocated. The fact that allantoin has no antiseptic action, prompted Greenbaum to add 0.5% chlorbutanol to the fluid to obtain this desirable property. To facilitate preparation of the allantoin solution, several manufacturers provide capsules containing sufficient allantoin crystals ready to be dissolved in sterile distilled water, usually 100 cc., prior to use.

Robinson advises that before the solution be applied, the wound should be debrided (foreign matter removed) and well washed with sterile water. Kaplan feels that the wound should be cleaned thoroughly with hydrogen peroxide, followed by ether and then by bathing with sterile water. To secure the best results, the wound is first covered with gauze soaked in the solution, then a wet pack of allantoin is placed upon this and then finally covered with a dry dressing. In deep wounds, the solution may be poured directly into the cavity, or the gauze dressing is inserted deep into the wound. Since allantoin works only when in direct contact with the tissue, the packings must be wet to be effective. Dressings must be changed as soon as they become dry. Changes can be made rapidly and painlessly. Overgrowth of granulation tissue may be controlled and prevented by removal of the medicinal agent. No other chemicals should be used in the wounds during allantoin treatment.

Because of the need for constant contact of a wet dressing, which is effective only as long as it is wet, it has been found that an allantoin ointment offers several advantages over the solution.[12] First the ointment itself promotes healing. Then, too, the ointment insures a constant supply of allantoin directly to the wound, for a long continued period. The ointment also removes the necessity for frequent dressing changes. Comunale[15] employed at a 5% unguentum of allantoin in equal parts of lanolin and white petrolatum. This ointment, he found, also helps to remove large masses of necrotic tissue. Greenbaum's experiments convinced him that a greaseless base was best. His ointment provides a 2% solution of the drug. Quantities up to 5% may be used. The requisite amount of allantoin is dissolved in hot water, the solution is brought up to 70° C. Glycerine and triethanolamine are dissolved in the solution. Melted stearic acid is finally incorporated in the mix-

ture. A smooth 2% allantoin ointment results. Green baum also adds 0.5% chlorbutanol as an antiseptic. The ointment works best where surface action is desired. The solution, however, is more advantageously used where deep penetration is needed.

Allantoin has been suggested as a surgical dusting powder, for open cuts and slow or non-healing wounds. The powder may also be administered by insufflation. Bethune suggests that powdered allantoin might be used for dusting wounds to stop generalized oozing. One commercial product contains 2% allantoin plus antiseptic and soothing ingredients in an absorbent base.

Greenbaum states that the incorporation of allantoin in a water-soluble base makes the healing properties of allantoin available for treatment of sinus conditions, and for the therapy of diseases of the eyes, nose and throat. Tragacanth bases are often used in the preparation of these products. Modifications of these water soluble jellies have been recommended in the treatment of rectal conditions, such as internal and external hemorrhoids. Another allantoin jelly is adaptable for the treatment of sunburn and sun poisoning.

For the treatment of gastric ulcers and tumors, Macalister used an infusion of comfrey root plus a saturated solution of allantoin. The success of this method encouraged others who got similar good results. Bramwell[16], a contemporary of Macalister, had used a similar root extract for the relief of gastralgia (stomach pain). Reviewing this earlier work, Greenbaum feels that a combination of allantoin with vegetable mucin, such as that obtained from okra, should be valuable in the treatment of gastric, peptic and duodenal ulcers. As he points out, "Allantoin with vegetable mucin combines the mechanical coating action of the powdered okra on the lining of the stomach, with the healing action of the allantoin on the inflammed mucosa of the stomach.[12]

Allantoin may as a rule, be used in almost all conditions where maggot therapy has proven successful. In addition, allantoin can be employed where larvae cannot possibly be applied. The main use of allantoin, as has been indicated, is in the treatment of obstinate ulcers and other slow or improperly healing wounds. Allantoin, it appears, produces a medium apparently distinctly unfavorable to bacterial growth. The treatments with allantoin have proven effective in wounds lined with congested, swollen indolent tissue, which is poor in circulation and is discharging pus. Comunale reports that when allantoin is used the drainage is thin and copious, without odor and resembles the results obtained when maggots are applied. The edges of the healing wounds are similar to those which occur with maggot therapy.

Allantoin has been most frequently reported in the therapy of ulcers of all types, including rodent, paralytic, varicose, tuberculous, and corneal ulcers. Ulcers of the legs have been particularly benefited. Macalister first reported on the successful use of allantoin in the treatment of a large ulcer which had resisted therapy for five years. Robinson's use of allantoin solutions for similar conditions was corroborated on a large number of cases in hospitals in Washington, Pittsburgh and New York. Kaplan reports similar good results on there cases of leg ulcers. Greenbaum indicates that allantoin is of great value in treating chronic varicose ulcers. Brailey[17], reported on the promotion of granulation in corneal ulcer by allantoin, as far back as 1913. While investigating a method of testing the therapeutic effectiveness of substances in cancer, Lustig and Wachtel found that allantoin, among other materials, tended to delay the formation of tumors.[18] The use of allantoin in the treatment of gastric ulcers and tumors by Macalister has been mentioned.

The danger of superficial ulcers is that they often develop into a deep wound involving the subcutaneous tissues. Sometimes the fibrous sheath of the underlying bone may become infected resulting in periostititis. It is evident why prompt attention to such wounds is essential. Allantoin preparations are being used to replace many of the usual methods and dressings.[14] Allantoin has shown considerable effectiveness in the management of osteomyelitis, an inflammation of the bone marrow or of the bone and marrow. Although Robinson found that allantoin did not cause healing as fast as maggots in such cases, particularly in deep seated infections, Comunale treated osteomyelitis without the insects. He used only allantoin preparations, solution and ointment, and was completely successful.

Allantoin has been used in the medical care of burns which failed to heal, X-ray burns and other lesser degree burns and scalds. The drug is also indicated after surgical operations where the desired healing does not occur. Macalister cured a fistula which persisted after an abdominal operation. Allantoin ointments applied to perforating wounds in the region of the groin, resulted in healing and closure. It has been used after gall stone operations and for healing drainage tube tracks. In a case of tuberculosis of the legs, complicated by infection of the hips, improvement was obtained with allantoin fluid and cream. Unhealed amputation stumps, and stumps resulting from diabetic gangrene respond well to allantoin applications.

Certain dermatological conditions such as carbuncles, fissures resulting from athletes' foot, impetigo and the like may be benefited by allantoin. Allantoin also aids in the formation of new skin after infection or injury. It has been indicated that this drug is of value in mastoid conditions and for relieving inflammed nasal mucosa. The compound finds employment in proctology and urology and for certain infectious lung conditions. There is evidence that this agent may produce fine results in dentistry for the treatment of infections of the jaw and other complications.

Early in 1938, a patent was granted for a new allantoin compound, Bismuth allantoinate, a fine, white or light yellow powder. It is claimed that this relatively

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TESTED FORMULAS

DENTIFRICES—tooth powders or tooth pastes—have one major purpose, which is cleaning the teeth. All other functions must be subsidiary to this one. There has been much controversy as to the ability of these preparations to exert an antiseptic effect in the oral cavity; we have seen data which indicates that a properly made product can have such antiseptic effect. But this does not settle the controversy as to whether antiseptic action is beneficial. The removal of pathogenic bacteria necessarily involves the removal of harmless or useful oral bacteria growth. In any event, the formulation of an antiseptic dentifrice involves elaborate experimental work and will not be discussed at this point.

In tooth powders, to be discussed first because of their simplicity, selection of raw materials is of primary importance. Tooth enamel is relatively hard, but may be scratched by improper abrasives, and a study in a recent issue of "The Journal of the American Dental Association" is quite exhaustive. Using precipitated chalk as the standard, it was found that c. p. tricalcium phosphate was 91 per cent. as abrasive, a specially prepared tricalcium phosphate was 38 per cent. as abrasive, and a specially prepared dicalcium phosphate was 76 per cent. as abrasive. Prepared chalk was 116 per cent. more abrasive, magnesium carbonate 48 per cent. more abrasive, magnesium oxide 21 per cent. more abrasive, c. p. dicalcium phosphate was 34 per cent. more abrasive and U. S. P. tricalcium phosphate was 129 per cent. more abrasive than precipitated calcium carbonate. The conclusion reached was that all of these abrasives were quite satisfactory as regards their action on the teeth, as long as they were pure products. No mention was made of other substances occasionally used in tooth powders, including orris root, and there is no good reason for their use.

Along with the abrasive, a detergent should be included in the composition, to remove the powder itself and material dislodged by the brush. A neutral powdered soap is perfectly satisfactory for the purpose, but various wetting agents and synthetic detergents may be utilized if desired. In considering these newer materials, the patent situation in regard to any particular item must be investigated to avoid infringement, and assurance of complete harmlessness must be obtained.

Epsom salts, magnesium sulfate, has been recommended by private sources as a valuable addition to dentifrices. Perhaps it works by stiffening the tooth brush bristles, but it does seem to improve the appearance of the teeth.

Perborates, and presumably other peroxides, should not be used in ordinary dentifrices. "The Journal of the American Medical Association," editorially, does not consider that sodium perborate has any preventive value against Vincent's disease, even doubts its real efficacy as a treatment, and cites cases of burns of the mucous membranes caused by its use. A good combination of abrasive and detergent probably goes as far in whitening the teeth as it is safe to go.

The manufacture of tooth powder offers no special problems. The powdered abrasive is simply mixed very thoroughly with the soap powder and other ingredients. Flavor is preferably first mixed with a small amount of the powder or one of its constituents and this mixture is then incorporated into the main batch.

Tooth paste can do no more for the teeth than the powder, but it still remains the preferred form. Simply, it consists of the abrasive made into a paste suitable for extrusion from tubes. Actually, to make a stable paste of the proper consistency is not an easy matter.

Active abrasive material should comprise at least forty per cent. of the mixture. Soap, or a synthetic detergent, is used to give lathering power and may be present to the extent of twenty per cent., less than this usually being required. Gum or starch and glycerine, with a little water if desired, is the excipient. Edible glycerine substitutes, such as ethylene glycol or sorbitol, may have some advantages over glycerine itself, while the gum may be tragacanth, karaya, Irish moss, etc. A small proportion of mineral oil is useful in permitting easy extrusion from the tube. Flavor should be chosen to be non-irritating, a small amount of alcohol may be useful in acting as a solvent for the flavor, and a preservative for the gum or starch is absolutely essential.

DENTIFRICES

By JOSEPH KALISH

Tooth Powders

Precipitated chalk	89.0	Tricalcium phosphate	58.0
Neutral powdered soap	10.5	Dicalcium phosphate	34.0
Flavor	0.5	Neutral powdered soap	7.5
		Flavor	0.5
Precipitated chalk	75.3	Precipitated chalk	68.1
Magnesium carbonate	6.5	Magnesium oxide	2.3
Sodium bicarbonate	8.7	Sodium bicarbonate	13.6
Neutral powdered soap	9.0	Sodium chloride	15.5
Flavor	0.5	Flavor	0.5

Tooth Pastes

Dicalcium phosphate	60.0	Precipitated chalk	38.0
Tragacanth	0.6	Magnesium hydroxide	5.0
Karaya	1.2	Neutral powdered soap	5.0
Mineral oil	1.0	Starch	6.5
Glycerin	25.0	Glycerin	30.0
Water	11.6	Water	14.8
Flavor	0.5	Flavor	0.5
Preservative	0.1	Preservative	0.1
Precipitated chalk	35.0	Precipitated chalk	51.9
Tricalcium phosphate	4.0	Magnesium carbonate	5.0
Magnesium hydroxide	4.0	Neutral powdered soap	5.0
Starch	4.5	Tragacanth	1.5
Tragacanth	0.1	Glycerin	32.0
Powdered soap	1.1	Mineral oil	2.0
Glycerin	27.5	Water	2.0
Water	23.2	Flavor	0.5
Flavor	0.5	Preservative	0.1
Preservative	0.1		

Using raw materials of good quality, the finished paste will be very nearly neutral in its reaction. If a slightly acid paste is required, soap, precipitated chalk, and other substances that react with acids will have to be omitted from the formula. There is no obvious reason why an acid dentifrice is preferable to one that is neutral or slightly alkaline.

Probably the best way to manufacture tooth paste consists of mixing the powder ingredients with the flavor separately, combining the gum, glycerine, soap, and preservative to make a jelly, and then grinding the powder into the jelly. This grinding is most important and difficult to do satisfactorily on a laboratory scale. The jelly is made by mixing the gum or starch with the glycerine, water, and oil, heating to about 120° C. and stirring the mixture at this temperature until it becomes quite homogeneous. It is mixed with the powder when cold.

EPHEDRINE

Due to the interest in ephedrin resulting from the shortage and the higher prices, we published an article on the subject in our February issue. In this article we indicated the sources of ephedrin including information regarding the synthesis. Since that time we have learned that synthesis of the product is definitely planned in this country to sell at reasonable prices. In addition, the following letter has come to us to correct some of the impressions given in our article.

Editor,
Drug & Cosmetic Industry:

Your article on Ephedrin in the February issue requires some important supplement concerning the synthetic product.

It is true that the racemic compound synthesized from phenylethyl ketone or from phenylmethyl diketone has been used for years ("Ephetonine") and that it is less efficacious than the natural l-Ephedrin.

But in the meantime some important progress has been made in the practical synthesis of the l compound, in optical configuration and physiological effect identical with the l-Ephedrin extracted from Ma Huang.

The first process uses the optical active phenylmethyl ketol prepared according to Neuberg by fermentation of sugar in presence of benzaldehyde (Biochem. Ztschr. vol. 115, p. 282 and vol. 128, p. 610). When this ketol is reduced in presence of methylamine, l-Ephedrin is obtained. (Knoll, U. S. Patent 1956950; Brit. Pat. 360334; German Pat. 548459 and 585667 Kl. 12 q).

The second process to be mentioned is an invention of the I. G. Farbenindustrie.

Racemic Ephedrin can be and has been separated into the optical antipodes. But, unlike racemic Adrenalin, which is a close relative of Ephedrin in chemical constitution and pharmacological effect, the useless dextrorotatory component could not be racemized by the usual methods and therefore half of the substance was lost for the manufacturer.

This disadvantage has been overcome by the I. G. Farbenindustrie as described in the German Patent Application 52353 from Mai 15, 1935, published Mai 20, 1936.

Ephedrin as a secondary amino alcohol is prepared by reduction of the corresponding amino ketone. Now, when separating this racemic amino ketone into the optical antipodes, instead of performing the cleavage with the amino alcohol, the worthless dextrorotatory ketone has been found to be easily racemized by heating it with diluted mineral acids, and therefore it can be saved for the further process.

Reducing the laevorotatory ketone, natural l-Ephedrin is obtained.

No judgment can be given on the commercial feasibility of the processes mentioned, especially when the Chinese source of the plant is accessible again. But at any rate, the chemist interested in the Ephedrin problem should be acquainted with the described patents omitted in your article.

Very truly yours,
GEORGE ROEDER, Ph.D.

Allantoin

(*Continued from page 453*)

insoluble salt decomposes in the presence of wound serum and slowly releases allantoin. With this salt it is believed that dressings will not have to be changed so frequently as required with ordinary allantoin. In addition, bismuth hydroxide, which results from the decomposition of the preparation, is also asserted to create an additional curative action upon wounds.[19]

It must not be assumed that allantoin has completely eliminated maggot therapy. True, allantoin is much easier to obtain and is simpler and safer to use. The pure drug is free of objectionable contaminants and dangerous organisms and can be made up in several ways for more convenient and effective use. Allantoin produces the same results as maggot excretions. It can be used in the wounds for a much longer period. Consideration of the patients' comfort is an important factor. The fact that pain usually ends with application of the compound and that the agent is stainless, safe and odorless must not be overlooked. It had, however, taken a long time for Baer to convince surgeons of the value of maggots and to overcome their prejudices to this form of treatment. Indeed, the use of maggots is increasing, as witnessed by the regular appearance of reports on their use in the medical literature. Nevertheless, allantoin has become firmly established. Experiments and new applications are constantly widening the scope of its usefulness. It must not be forgotten that it is still a comparatively new drug and as such, requires time to prove or disprove its value.

More recently it has been stated that urea may have action and uses in wound therapy similar to those of allantoin. Robinson[20], continuing his studies, reported that urea produced by the hydrolysis of allantoin was probably responsible for the healing action of both the maggots and allantoin. Robinson tried urea in a series of cases and found the drug capable of healing chronic purulent wounds. Urea has the advantage of being even cheaper than allantoin, and at present, of being much more readily available.

Holder and MacKay[21], who have themselves used urea effectively, report that others have, from time to time, during the past twenty years, also employed this drug. Despite this evidence, urea has never come into general use. This can perhaps be partly explained by the discussion which follows Comunale's report[15] where it is stated that urea has the disadvantage of emitting

(*Continued on page 469*)

AIR CONDITIONING

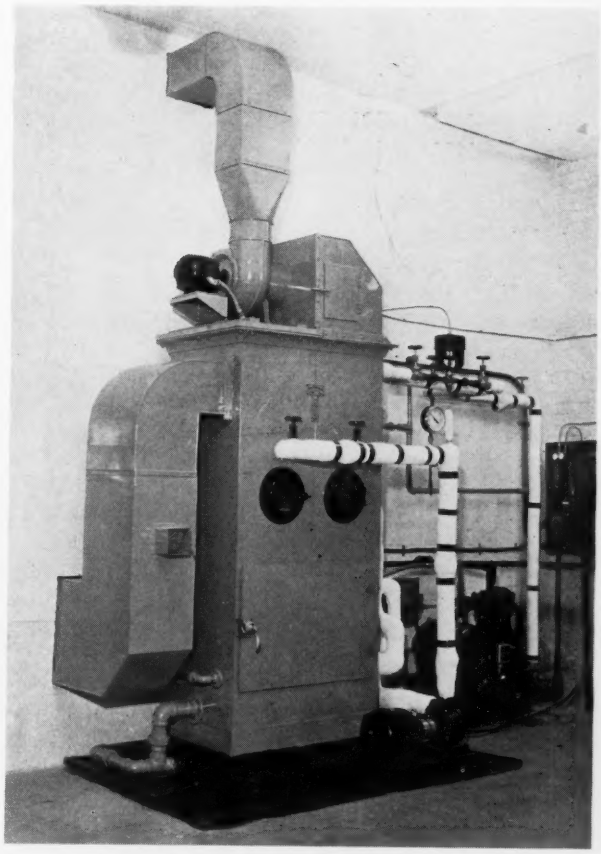
By FRANCIS CHILSON

THE approach of summer reminds us of heat, high humidity, and air conditioning. The increasing use of air conditioning for factory purposes prompts us to review the subject briefly because so many of the systems now installed are, to say the least, inadequate.

There are three principal reasons why so many air conditioning systems have proven to be disappointments just when they were needed most. The first is the tendency on the part of the manufacturers to buy on price only. The second is the common practice of salesmen, from even reputable air conditioning companies, to underestimate conditions so that they can quote prices that will beat competition. The third reason is that the air conditioning field is flooded with equipment builders who have neither the scientific background nor the engineering experience intelligently to design air conditioning systems.

With reference to the short-sighted, uneconomical practice of buying on price only, manufacturers should realize that they get what they pay for, and, in this case, usually less. Air conditioning systems are composed of standard materials and equipment—ducts, fans, compressors, filters, humidifying or dehumidifying equipment, etc. Individually, these units of equipment for identical capacities do not vary widely in price in the open market. Therefore, why should anyone expect that when these units are combined in a scientifically designed and coordinated system, there should be a wide difference in price between systems of the same capacity. In buying air conditioning equipment the manufacturer is purchasing uniform performance under all conditions, and if the system he buys does not give him that, he has made an unwise investment.

For the tendency of equipment builders to underestimate capacities in order to get prices down to competitive levels, we can blame the buyers in part, but we must also blame equipment builders who employ salesmen insufficiently trained in the science of air conditioning to make correct evaluations of operating conditions. This state of affairs will be corrected in time, but in the interim, the only way a buyer can be sure that all bidders are basing prices on the same operating conditions, is to compare all conditions and specifications in the most careful detail and then make the low bidders prove that they know what they are doing.



Small air washer installation for conditioning testing laboratory. Refrigeration is furnished by small compressor shown at right. Photos courtesy J. O. Ross Engineering Corp.

Equipment guarantees are not worth a damn in buying air conditioning equipment for it is very easy for the equipment builder to alibi an air conditioning equipment failure on the ground of changed operating conditions of some sort, which were not anticipated or specified by the purchaser. Once a system is installed, and it invariably is installed during cool weather when it is perfectly easy to meet requirements, the buyer has

no recourse but to pay for it. Later on, if the system does not fully meet expectations, the buyer cannot tear it out and ship it back to the manufacturer because such a procedure is too costly and interferes too much with production.

As to "gyps" in this field, every plumber is now in the air conditioning business and buyers who are foolish enough to buy air conditioning equipment from such outfits, which certainly do not have a broad background of experience and training, and a solid financial foundation, deserve what they get.

There is only one way to buy air conditioning equipment and that is to play safe even at a cost of ten or fifteen per cent. more in the initial investment. Air conditioning equipment is, of course, expensive; in fact, *it is too expensive to allow for quibbling about a few extra dollars, and it is too expensive to buy anything but a perfect job.*

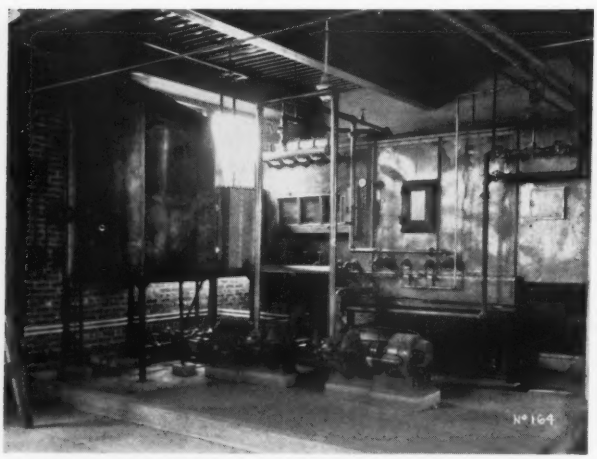
Now what is air conditioning? Although popularly believed to consist only of air cooling this science consists of four interrelated divisions accompanied by air movement:

Heating
Cooling (refrigeration)
Dehumidifying
Humidifying

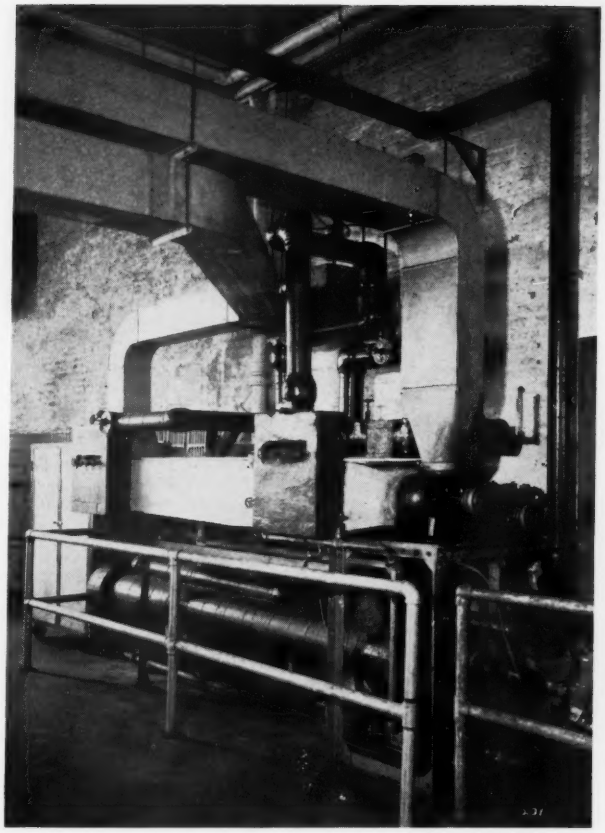
Each of these divisions constitutes a science in itself and specific conditions may require emphasis on any one of them. Each division requires specialized equipment which may be used alone, but general air conditioning for all year service combines all divisions and all equipment. Besides these are certain subsidiary functions that air conditioning may be called upon to perform—controlled ventilation, dust removal, odor removal, ozonation, and bacteria removal.

The equipment, therefore, consists of:

Fans and ducts for distribution and control of air flow.
Filters for removal of dust from air.
Heat exchangers for cooling or heating as required.
Humidifying equipment.



Apparatus for furnishing cold, dehumidified air to chocolate covered cake or eclair cooling tunnels. Air is cooled by steel coils with spiral steel fins. Brine is the refrigerant.



Air washer installation for furnishing conditioned air to special powdered foodstuff dryers. Refrigeration is furnished by brine from a central plant.

Correctly designed fans, ducts, dampers and grilles are required for proper air distribution and recirculation. When the duct system is inadequate "dead spots" or air pockets will ensue and it will be impossible to maintain uniform conditions.

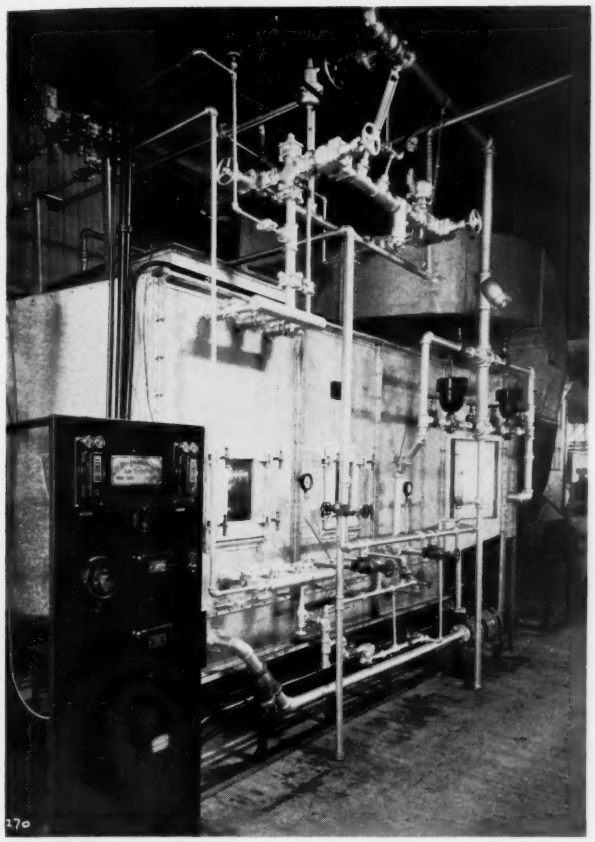
Filters may be of any type—cloth, paper, glass, wool, viscous film—or instead the water spray may be used for dust removal.

Heat exchangers may be of the straight pipe or fin coil type. In winter they may be used for heating the air by means of steam. In summer they may be used for cooling by means of cold well water, if available, or a refrigerant if well water is not available. When refrigerants are used it is essential to employ compressors of one kind or another. But cold well water is the best and cheapest coolant.

Humidification may be achieved by passing the air through a properly tempered water spray, or in certain applications, by the direct introduction of steam.

Dehumidification may be accomplished by passing air over chilled coils, by passing it through a low temperature water spray, or by adsorption with silica gel or activated alumina. Absorption systems using materials such as lithum chloride are gradually passing out in favor of adsorption systems.

When low relative humidities are required, dehumidification can be accomplished only by means of adsorp-



Air washer system to which refrigeration is furnished from a central ammonia plant.

tion systems, such as activated alumina or silica gel. When normal humidities are required, as for comfort reasons only, then dehumidification by cooling is adequate.

The installation of an air conditioning system should provide for leakage of outside air. In old buildings the amount of leakage is considerable, in consequence of which the air conditioning system must be designed for larger capacity than an equivalent amount of space in a new building would need. Therefore, the cost of the system per square foot of conditioned space and the operating cost per day is much greater in old buildings than it is in new ones which have been built for air conditioning.

Well water is the cheapest coolant and fortunate is the manufacturer whose property has wells of adequate capacity. Well water can be circulated through the cooling system and from there to storage tanks for further use in manufacturing purposes. In one plant where the water supply is adequate for all but abnormal conditions, an automatically controlled refrigerating unit is used as a standby. When the available supply of well water is no longer adequate, the refrigerating unit cuts in and lowers the cooling water temperature sufficiently to reduce the amount of water required.

The sequence of operations and the equipment required for air conditions is usually as follows:

The mixture of inside (conditioned) air and of a certain amount of outside air is first passed through air cleaning devices, such as air filters, and then through either an air washer or a set of plain or finned type coils. The air washer may use warm or cold water for humidification and dehumidification purposes respectively.

When coils are used for cooling and dehumidification of air, some additional means must be employed for humidification of air whenever such will be required.

From the washer or coils, air is drawn through an air reheater by a fan and discharged into the conditioned space. If extra clean air is required, additional oil filters are used.

The cooling of the water is performed by:

(a) Mechanically driven refrigerating units
(b) Vacuum-steam jet unit
(c) Direct introduction of ice blocks.

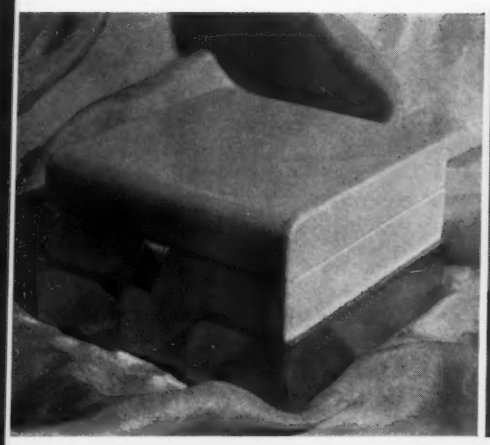
The plain or finned type coils may utilize circulation of cold water, brine, or of a refrigerant through them. In the first case it would be possible to use the same coils in winter time for heating of the air by passing hot water through them instead of cold water.

As the warm, recirculated air is passed over cold surfaces in the heat exchanger, or through the cold water spray, a certain amount of the moisture it carries will condense out, thus dehumidifying it. But if low humidities are required, the air must then pass through a dehumidifier before it is cooled. Although low humidities can be obtained by direct refrigeration, such a procedure is not practical because the coils will frost up in a very short time. Therefore, for a continuous performance a dehumidification unit of the adsorption type, such as the Lectrodryer, is used to remove the moisture before the air is cooled.

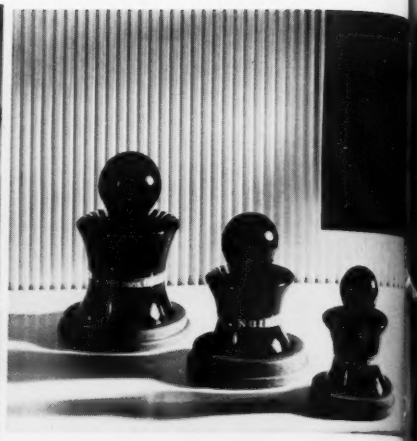
In winter the same procedure and the same equipment is used excepting that the air is dehumidified by the introduction of water in the form of a warm spray or by the direct introduction of steam, and then reheated in order to take care of heat loses from the conditioned space.

The precedure and the apparatus are simple. But the control of temperatures and humidities at all times depends upon adequate equipment capacities and efficient control instruments. The operation of the system depends upon the instruments. None but the best and the most suitable should be used.

Large room used for dough fermentation. Constant temperature of 80° F., and relative humidity of 75% are maintained throughout the year.

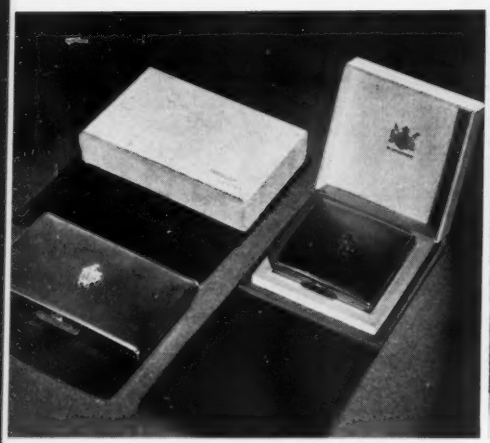


Le Cross
Le Polish
Remover
EMOLLIENT
Le Cross
Le Creme
Polish
Base
Le Cross
Le Vernon
BASE COAT



PRODUITS NINA RICCI
nina
dusting powder
NEW YORK
nina
eye lotion
nina

FALCUM
MEXICANA
MEXICANA



Many
Days
Torquay Engl

HELENA RUBINSTEIN

Helena Rubinstein presents Town and Country face powder, which is made by what is said to be a unique new pre-expansion process. It comes in four shades: peach-bloom, rachel, Mauresque and the new Bisque.

LA CROSS

A special spring promotion item, called the "La Cross Trio," is being offered by La Cross. This introductory kit contains regulation size bottles of La Cross nail polish, Stazon base coat, and glycerated polish remover, attractively packaged in cream and gold in upright container which opens at front and top.

PARFUMS WEIL

Weil's Noir bath oil in the black crystal hour glass bottle, is keyed in feeling to the deep, haunting perfume "Noir" introduced by Weil last winter.

CHARLES OF THE RITZ

Ritztone sensitive skin cleanser is of the consistency of heavy table cream. It seeps into the pores, freeing them of dirt and at the same time its oils lubricate and soothe a sensitive skin.

ELENE OF VIENNA

Elene of Vienna's Beauty Bath is a delightful water softener. It is scented with Austrian Tyrol pine and is highly concentrated so that very little is required.

STUART PRODUCTS CO.

Among the novelties offered by Stuart Products Co., is a miniature champagne bottle filled with an after bath cologne in a champagne cooler which is filled with bath ice. The floral quintuplets are dressed in complete new dresses, and the "Picanette" presents a bottle of honeysuckle perfume dressed to represent a southern mammy.

PRODUITS NINA

Produits Nina has added three new items to its treatment line. Nina beauty mask is a quick pick-up mask that gives a temporary lift to the face. Nina Eye lotion is an eye wash to be used in an eye cup for tired eyes. It is also excellent used as a refreshing treatment. Nina dusting poudre is a delightfully scented light weight dusting powder, with a swansdown puff in the box.

SPOONER

Spooner's "Mexicana" toiletries have been packaged in colorful packages along the Mexican trend. A head with a gay sombrero appears on each label and the powder boxes boast brightly colored pom-poms.

BARD-PARKER CO.

The Bard-Parker Co.'s Hematological case is an ivory moulded box containing complete equipment for taking bedside blood samples. A metal button catch releases the cover to disclose the fact that the hinge is also designed to contain springs for suspending in the cover the two glass blood diluting pipettes made by the Ruth Glass Division of Kimble Glass Co.

SUPERIOR PRODUCTS CO.

The Superior Products Co., Dallas, has added two new items to the line—"Honey-Belle" cleansing cream and "Honey-Belle" cold cream. The attractive package for these, embellished with wine-colored cap and label, was designed by the Superior Products Co. in collaboration with Owens-Illinois Glass Co.

YARDLEY

For the woman who prefers her accessories unadorned, Yardley presents a compact which is charming in its simplicity of design. The platinum finish is engine-turned, producing an all-over effect of tiny ridges.

WORTH

Worth's eau de Cologne (distributed in U. S. by Al Rosenfeld, Inc.) comes in the Dans La Nuit and Je Reviens fragrances, in four sizes of crystal-clear Lalique bottles. The fragrances are very similar to the perfumes.

BATHES

Bathes toilet water, with the Devon Violets scent, pressed from fresh English violets, is being offered by London House.

CHEATHAM CHEMICAL CO.

The Cheatham Chemical Co., Atlanta, is marketing this new brilliantine package. Stock Riviera toilet bottles designed and manufactured by the Hazel-Atlas Glass Co. were adopted.

ROSINE

The perfume for Marco Polo—Rosine's Nuit de Chine—is presented by Maurice Levy simultaneously with the film "Marco Polo." It is boxed in an oval of black and gold brocade, and the oval shaped flacon is topped by a knob stopper of midnight blue.

GERMAINE MONTEIL

Germaine Monteil has packaged generous supplies of six cosmetics in a charming ivory box, and christened it "Debut." Cleansing cream and cleansing tonic, night feeding cream, beauty balm, powder and lipstick, are offered at a price which allows for experiment without a qualm of extravagance.

PARFUMS CHARBERT

Parfums Charbert's hair tonic tones the scalp, livens the hair, and keeps the hair well dressed. The bottle comes encased in either brown or black pigskin.

CHANEL

Chanel's "Huile pour les levres" has a delicate jasmin odor, and is grand for the lips. The pink color of the oil does not come off, it prevents chapping and—which at the moment is an exciting note—makes them glisten like the lips of the movie stars!

LENTHERIC

Lentheric suggests "Beau Pourri" as a gracious touch in the guest room, an attractive scent in the drawing room, and a clever source of fragrance in closets. Lentheric's own blend of many specially selected herbs and flower blossoms is presented in an ivory-toned ceramic jar.

POTTER & MOORE

Potter & Moore has created the Devon perfume package especially to meet the spring demand. It is obtainable in two Potter & Moore Devon perfume odors, Lilac and Lily of the Valley. The attractive bottle has an orchid molded cap and is packaged in an orchid box.

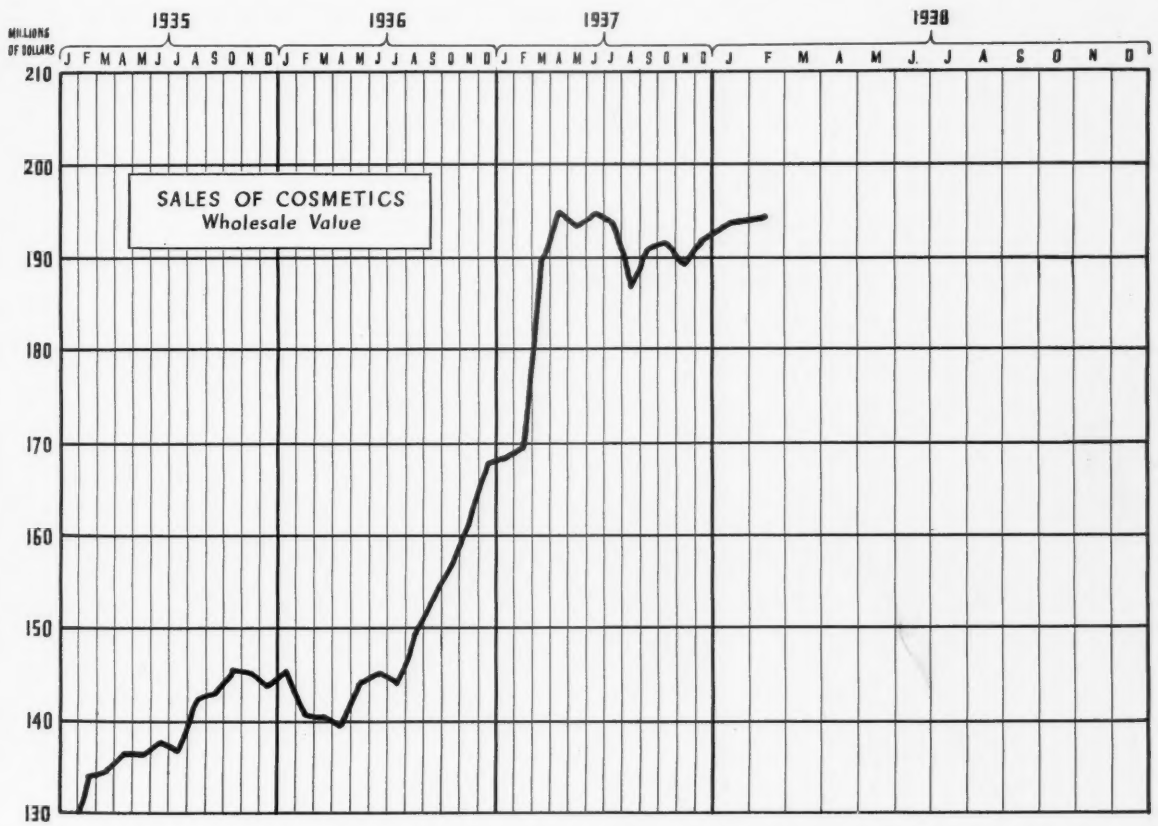
COTY

Cologne Parfumee by Coty is being introduced in a new flacon—tall, graceful, tapering, in new fragrances, Cologne Parfumee Chypree and Ambree, lasting, strong and pungent, offered in two sizes. A bright color band on the molded screw cap designates the odor.

MERCHANDISING NEWS

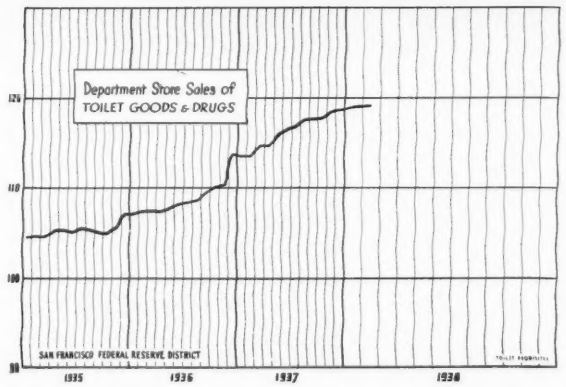
THE COSMETIC TREND: The demand for toilet goods seems to have held up fairly well but the business is somewhat spotty. Individual days or weeks show unusual differences. The February demand fell behind in some districts but March has brought an improvement. The impression is that Easter will help to raise averages. Cities with a good resident middle class population generally have come out better than the industrial centres. Rural markets hold best promise, but can not compensate, of course, for eventual losses in big population markets.

Sales are normally distributed over the various branches of the industry but seasonal items have come to the forward with the arrival of the first warm days.


1935
1936
1937
1938
MILLIONS OF DOLLARS
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
210
200
190
180
170
160
150
140
130
SALES OF COSMETICS
Wholesale Value

Sales of toilet preparations for the year ended February 1938 had a wholesale value of $194,165,000, representing an increase of four-tenths of one per cent. over the $193,450,000 for the twelve month period ended January 1938, and an increase of 14.7 per cent. over the $169,491,000 in the year ended February 1937.

The adjusted index of department store sales of toilet articles and drugs in the New York Federal Reserve District declined to 115.9 in February 1938, compared with 116.1 in January 1938 and 112.0 for February 1937. These indexes compare with the decline in sales of 2.7 per cent. for February 1938 compared with February 1937.



Sales of toilet goods and drugs by department stores in the Chicago Federal Reserve District were 8.5 per cent. less in February of 1938 than in the same month of the previous year. The corresponding adjusted index numbers were 130.8 for February 1938, 131.7 for January 1938, and 125.3 for February 1937.

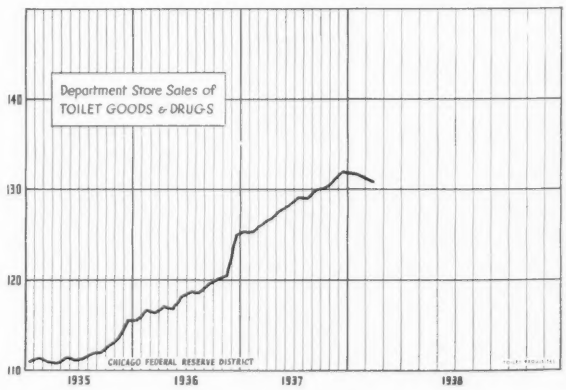
The foreign travel situation has been thrown somewhat into a turmoil in consequence of the happenings in Europe. Buyers do not expect this to have much influence upon their post-Easter travel promotions. The idea is that the foreign travel appeal is of value to the stores more as a sales builder for vacation merchandise than for its actual sales volume to ocean tourists. Domestic travel is expected to be heavy and will play an important part in toilet good sales all through the summer season.

Although there is no evidence of sales resistance at this time buyers do not propose to be caught napping. The situation calls for frequent spot promotions and manufacturers with suitable merchandise may find it useful to contact their outlets at suitable intervals.

There is a noticeable trend to stunt displays, not so much in department stores but in the drug stores, but everywhere there is an increasing tendency to dramatize the use of toilet goods. The manufacturer with an effective display will have little difficulty this summer to get it into the windows or upon the counter where there is space. Summer specialties, cooling creams and lotions, suntan preparations and others are most likely to reap the benefit. Buyers seem to think that the present is a good occasion to interest more men in the use of cosmetic specialties and a great many special promotions for men will be attempted in consequence.

Judging from early spring displays toilet goods this summer will be sold with a straight beauty appeal instead of the remedial one that was preferred by many buyers during last year. Buyers, apparently, have reached the conclusion that more merchandise can be

Sales of toilet articles and preparations by department stores in Baltimore declined 0.9 per cent., in Washington 0.3 per cent., and in the whole of the Richmond Federal Reserve District by 0.6 per cent. in February 1938, compared with February 1937. In the district, the corresponding adjusted index numbers were 133.8 for February 1938, 133.9 for January 1938, and 129.4 for February 1937.



Although department store sales of toilet articles and drug sundries decreased in Los Angeles by 2 per cent., they were 6 per cent. higher in San Francisco and 12 per cent. higher in the stores of the Pacific Northwest, averaging an increase of one per cent. for the San Francisco Federal Reserve District in February 1938 compared with February 1937. Corresponding adjusted index numbers for the district were 119.0 in February 1938, 118.9 for January 1938, and 113.2 for February 1937.

sold by pushing personal attractiveness and reserve the remedial argument for such specialties as freckle creams, tonics and combination treatments.

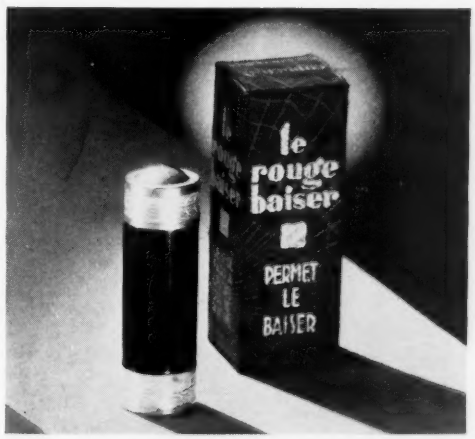
While the displays distinctly cater to the middle class purchasers there is no evidence of downward trading and the percentage of higher priced merchandise seems to be approximately the same as last fall, with variations dictated by the neighborhood and clienetele of the store.

"WHITE" ROUGE AND "BLACK" LIPSTICK!

Imagine a "white" rouge and a "black" lipstick! While both of these sound exciting, they are a bit disappointing because the white rouge isn't white and the black lipstick isn't really black. However, both cosmetics are sufficiently "different" to have aroused the curiosity of the consumer.

The White Rouge isn't exactly a new product on the cosmetic market, but it might be called a revival, because White Rouge made its appearance many many years ago and has continued to have some slight consumer acceptance in the middle west and far west. Although it created quite a sensation when first presented, enthusiasm naturally waned with the lack of push and advertising. And then too, years ago women weren't so eager for cosmetic innovations as they are today—as a matter of fact, they were as reticent then as the modern women are eager, to try new cosmetics. While this "revival" is apparently the same rouge, it has been taken over by a new company and is now extensively advertised as "an entirely different rouge that takes its color from your skin" which is enough to intrigue any woman.

White Rouge has an interesting story to tell—imagine a rouge that makes its color in the shade the complexion requires! Whether used on a blonde, brunette or titian,



White Rouge is said to produce the shade most becoming to the individual skin. White Rouge does not coat the cheeks with opaque color, but instead, gently tints the oils of the skin and the tone beneath determines the shade. It comes in loose powder form and is not white at all as the name implies, but a mauve color, and is applied with the fingertips, not with a puff, so that it can be rubbed lightly until the desired depth of color is produced. It is claimed that White Rouge makes a different shade for each individual complexion—on fair skin or deep summer tan it always looks natural.

The so-called "black" lipstick which seems to have created somewhat of a furore abroad and more recently in New York, may be the answer to the modern woman's problem of indelibility in a lipstick which still manages to keep velvety and non-drying. Paul Baudecroux, the chemist who is responsible for "Rouge Baiser," the kiss-

proof lipstick claims to have perfected a unique greasy lip rouge which is a perfect adherent, strictly hygienic, and one which when spread on the lips evenly will after twenty minutes be practically indelible. Its emollient qualities are said to be particularly agreeable to chaffed lips and its adherence increases if the lips are slightly moistened before its application. It is sold in beautiful cases of black and silver that open and close with a slight turn of the top which makes it easy to keep it enclosed at all times.

This unusual lipstick while it is referred to as "black" lipstick comes in six shades: nasturtium, light, medium, dark, claret and orange. The light shades however, are a very deep red and the dark shades appear almost black, the interesting feature being that the deep red shades when applied appear a bright color on the lips and the black colors are a brilliant red. This however, is not a chemical reaction that takes place on the lips, but only within the lipstick. In other words, the very deep red shade which is orange will appear orange on anyone the moment it is applied.

One New York store advertised this "Rouge Baiser" and sold almost 100 lipsticks in three days at the staggering price of $5 apiece. It will be interesting to note the progress of this lipstick and its repeat sales. If the claims made for its permanency and smoothness are true there would appear to be no doubt about the repeat sales.

A-HUNTING YOU MAY GO!...

In Chase of FLEETING TRADE

And smart CONTAINERS come to mind! Designs and decorations that fix attention on YOUR Brands • suggest their merit • invite their use.

●"NATIONAL" Container Service has proven resourceful, enthusiastic and capable in the solution of Packaging Problems.

Yoicks! **HUNTERS call "NATIONAL"**

NATIONAL CAN CORPORATION

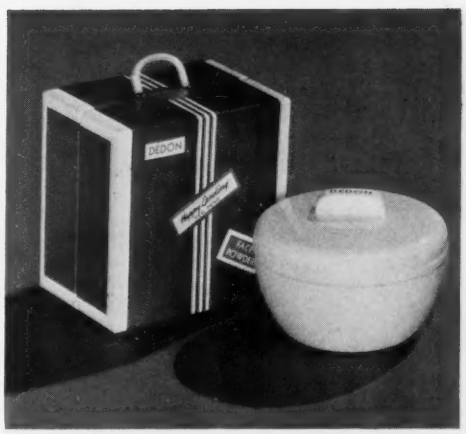
SUBSIDIARY OF McKEESPORT TIN PLATE CORPORATION

EXECUTIVE OFFICES • 110 EAST 42nd STREET • NEW YORK

New York City • Baltimore • Maspeth, N. Y. • Chicago • Boston • Detroit • Hamilton, Ohio

PACKAGING NOTES

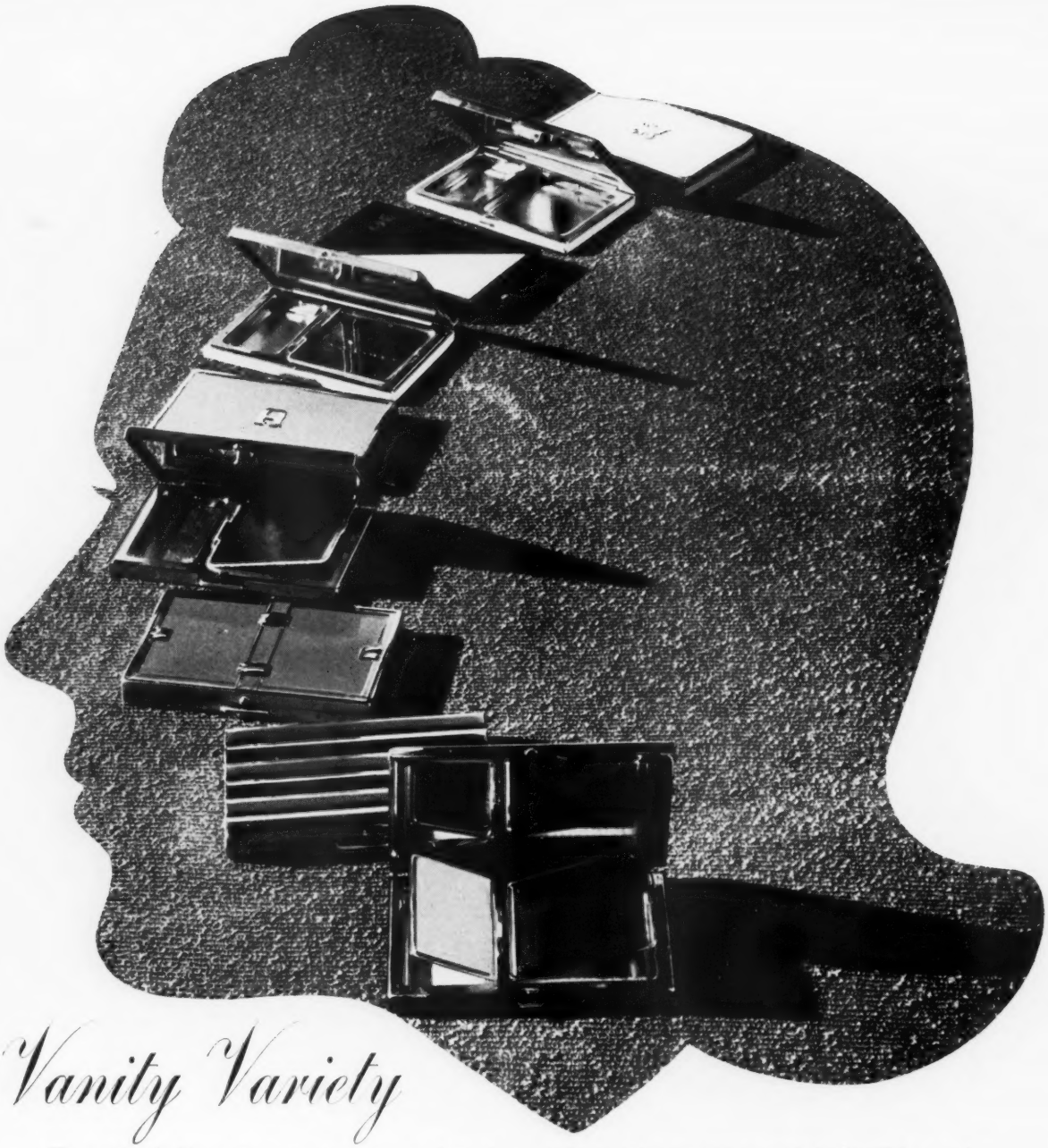
"HAPPY LANDING." Dedon's "Happy Landing" powder package seems to be a happy inspiration. To the woman who travels Dedon offers a happy landing with this interesting new face powder package. The powder is packaged in a jar with a leak-proof screw top, which keeps the powder where it belongs while traveling—in the jar and not sifted around the bag. Another interesting feature is that the swan's-down powder puff does not rest in the powder, it is separated from the powder by a small tray which fits in the top of the jar. To carry out the "Happy Landing" idea further, Dedon has packaged the handsome powder jar in a box which is a miniature replica of a traveling bag even to the handle and labels.



PACKAGING KNOWLEDGE: In making a plea for accurate knowledge of consumer standard reactions in impulse buying as related to the package field, Frederic H. Rahr, of the Bakelite Corp. asserts that this would be possible "if we will but submerge our own taste and our own desire for distinguished accomplishment in design with color and go to the public for an open-minded examination of what the consumer wants." In pointing to the colossal economic waste which follows a lack of such knowledge he outlined the following example:

"Let us say that in selling your product the use of the right color can save one full minute per package sale and it is a good retail salesman that can sell you in one minute something of which you do not like the color. Here's what is saved in making the sales of one million packages—16,600 clerk and customer hours for a combined saving of 333,332 hours which might well be spent in selling and buying other of your products. This represents $8,333 worth of clerks' wages at 50c per hour. Conversely now, this is what is wasted if the color of your product is such that it requires one extra minute of sales talk—$8,333 per million packages. Multiply this figure by the many millions of packages turned out each year with only standard consumer colors and you begin to appreciate the figure represented and the price paid for not knowing what the consumer buys fastest."

"A TUBE TO A TUB:" That single-dose container thing is in again, this time in a new bath preparation, "sulfuraid 21," a product of baer laboratories, new york, (It's the e. e. cummings influence gone commercial). "sulfuraid is packaged in a vial which "contains the correct amount of sulphur in solution, to give the necessary sulphur content to each sulfuraid bath." It "is just enough for one bath in your home, and equals a similar hot sulphur bath at the Spas. The period of time usually prescribed at any of the famous Sulpur Spas for "taking the cure" and "boiling out" is three weeks. Hence sulfuraid 21 is composed of 21 sealed tubes conveniently packaged in one attractive box; to be used one tube to a tub."



Vanity Variety

These eight double vanity cases represent one phase of Scovill's manufacturing service to the cosmetic field.

Whether orders are large or moderate, Scovill facilities can be adapted to meet the price, the volume, and the creative work required.

Vanities, closures, lipstick and eyebrow pencil containers, and companion material are made by Scovill for a majority of the industry's leaders.

Many a cosmetic house has found Scovill's cooperation profitable and uses it from the conception of the idea through to the finished product.

Further information is as near as your telephone. Just call one of the offices listed below.

SCOVILL
Masters of Metal

SCOVILL MANUFACTURING COMPANY

Drug and Cosmetic Container Division

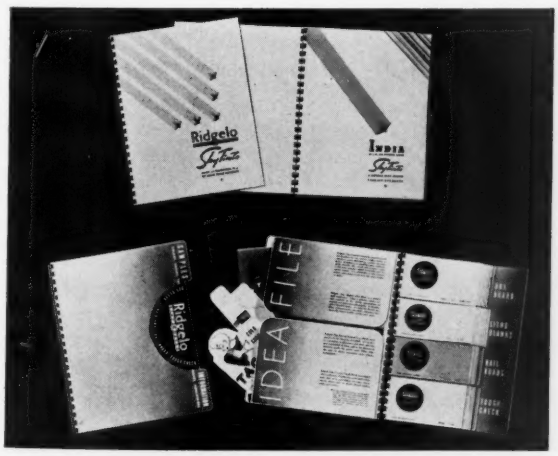
69 MILL STREET ★ WATERBURY, CONNECTICUT

Boston, Providence, New York, Philadelphia, Lynchburg, Va., Syracuse, Detroit, Pittsburgh, Chicago, Cincinnati, San Francisco, Los Angeles

IN CANADA: 334 King St., E., Toronto, Ont.

SEALING CORRUGATED CONTAINERS: The Robert Gair Co. has just published a complete textbook on "Sealing of Corrugated and Solid Fibre Containers," written by J. D. Malcolmson. The book is generously illustrated, covers all kinds of closures, and is said to be the first authoritative work on this subject. Copies are available upon request to the company.

LOWE SKYTINTS: Lowe Paper Co. has published a new sample book on Ridgelo Clay Coated Sky-Tints—eight new, delicate shades of coated boxboard stocked ready for shipment. This means that box-makers and printers may use modern, delicate backgrounds for fine folding box and direct mail work at very low cost. The company will be glad to send this lovely sample book to drug and cosmetic manufacturers who use or are planning to use folding cartons and are looking for ideas for color effects at low cost. At the same time, Lowe also has a new portfolio of samples and stock grades on the other Ridgelo boxboards which you might like to have for your files. Copies of one or the other, which are illustrated here, are available upon request.



"BEAUTY ON A TRAY:" Alexandra de Markoff seems to have achieved something beautiful and unique in the way of a special promotion. "Beauty on a Tray"—and that is what it really is—offers six Alexandra de Markoff spectrum cosmetics on a "pillow" of white glass, which will make a desirable accessory for any dressing table. Actually, this is an $8.25 cosmetic content value offered at $3.50 for a limited time. However, special sizes of face powder, lipstick and mascara are used. The eye shadow, cream rouge and foundation cream are standard size containers. The idea of using special sizes in some of these packages, is a wise one because while they serve as excellent introductory sizes, the consumer will not be tempted to take advantage of the promotion and stock up on the cosmetics for the rest of the year. The exquisitely designed milk white glass tray is in keeping with the individuality of the Alexandra de Markoff packages, and for display purposes, rests on a pillow of maroon velvet which helps to bring out the beauty of the tray. This clever presentation should have widespread appeal.

"BIAMIN:" Jergens new vitamin cream, "Biamin" is being marketed first in the syndicate stores at 10 and 25 cents. According to the company, "the new cream is impregnated with vitamins A and D which absorbed by the skin, help keep the complexion youthfully fresh and clear."

Allantoin

(Continued from page 456)

an unpleasant, objectionable odor. These doctors who had used both allantoin and urea, favored the former.

It now remains to be seen whether allantoin or urea will replace or supplement maggot therapy. The advantage of price which favors urea, could be eliminated as a factor if allantoin proves better. It is now a question of which will give better results with the least objectionable characteristics. This, of course, depends upon more research and general use of the drugs, so that comparisons can be made.

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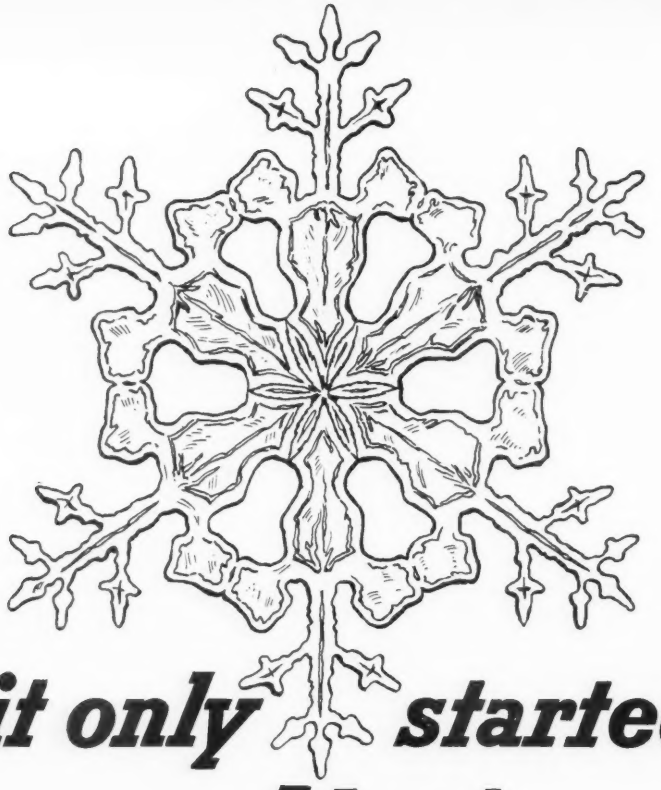


And it only started as an Idea!

Faced with the necessity of expanding his market, the president of a large company selling bulk products had an idea. He visualized the possibility of an entirely new use for one of his products, packed in smaller units and sold to a broader consuming market. Crystallizing his thoughts, he called for action. Many conferences and discussions were held, experiments made. Everything had been worked out but the package. Now the question which remained was—could Continental develop the type of container they needed with the proper closure to dispense their product?

A short time elapsed while Continental's research and development departments designed, packed, tested and experimented with their product. Then, the ideal container was evolved. That which only started as an idea had been realized.

Continental has helped many manufacturers to capitalize on merchandising ideas. Continental's own suggestions have been responsible for many important sales gains. No matter what your problem is you'll find Continental preeminently qualified to render intelligent service.

CONTINENTAL CAN COMPANY

NEW YORK CHICAGO SAN FRANCISCO

MONTREAL TORONTO

LEGAL ANGLES

By S. L. MAYHAM

AN UNFORTUNATE TAX OUTCOME

With action by the Senate Finance Committee on proposals by Senator King for elimination of the Excise Tax on cosmetics resulting in their defeat and the retention of the full 10 per cent. on everything excepting soaps and dentifrices, the industry's keen fight for removal or reduction of the tax practically ends in failure. This result is not in the least surprising to most of us although it is indeed a disappointment. There is very little chance of further action on the cosmetic tax although plans are being made for introduction of an amendment from the floor of the Senate calling for a reduction in the rate. The industry's representatives made good appearances before the Senate committee but they came to naught. The new tax bill reenacts the 10 per cent. tax on cosmetics but removes the 5 per cent. tax on toilet soaps and dentifrices. For that small relief the industry will have to be thankful. Not even the proposed clarifying amendment which would have defined the term "manufacturer" will be in the bill.

As I see it, there is little chance of any removal of this unjust and difficult burden unless the consumer is acquainted with the fact that the tax exists and that she is paying it. Arguments by industry representatives are of no avail. Congressmen live in an atmosphere of argument and are almost immune to formal presentations, even such good ones as that of Mark Eisner before the Senate Finance Committee. They are, however, by no means immune to pressure from their constituents at home. If women throughout the country could be told of the tax and of the fact that it is a direct burden upon their cosmetic purchases, I think they would complain vigorously to their representatives. They have done it in the case of other taxes which directly affected women's interests and activities. And Congress has listened and acted. But manufacturers will have to stop pussyfooting on the subject with their consumers. There will be no consumer or women's organization pressure if women are not even aware that there is a tax, and most women of my acquaintance are in that state of blissful ignorance. Let's tell them about it, or are we afraid to raise the issue publicly?

CONTENTS IN NORTH DAKOTA

The state Food Commissioner of North Dakota, who enforces the cosmetic law is not inclined to be lenient. In fact, he is inclined to be quite the reverse. In response to efforts to get him to establish greater tolerances in the marking of weights and measures on cosmetic packages, his answer has been a pretty blunt "No!" The regulations say that exemptions are as follows: One half ounce for solids by weight; one fluid ounce for liquids; and six units by numerical count. This means that practically everything will have to be marked. Also, no fraction with a denominator greater than eight shall be used. Of course, it *is* quite a task to figure in fractions.

ANOTHER TAX CASE

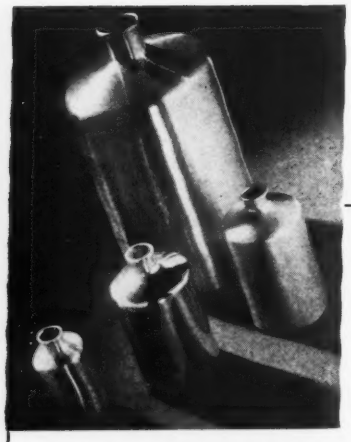
Still another case has been tried involving the "sales company set-up" for excise tax. The facts in this case are slightly different from those in the Bourjois and Inecto cases since they involve goods wholly or in part imported from a foreign country. However, the tax basis is approximately the same and the general issue of tax avoidance by means of a company which manufactured nothing but merely acted as a sales and distributing agency closely approximates that of the other suits which the government won. Attorneys for the company obviously believed that they had a case or they would never have allowed the matter to come to trial. But without prejudice, I may say that I believe very few suits of this kind against the government can possibly be won in view of the two sweeping decisions which the government has taken in the instances of Bourjois and Inecto. If I had such a case, I think I'd make the best compromise I could and forget it.

THE COST OF PRICE MAINTENANCE

Earl Means, for whose opinions all of us have a most wholesome respect, believes that the cost of injunctions under the Fair Trade Laws ranges from $150 to $450 each. That is high enough to make many people think twice before proceeding in defense of their price contracts. More significant still, however, is the fact that it practically washes off the decision of a New York Court that retailers themselves could sue competing retailers for violation of Fair Trade agreements. Not very many retailers in the drug store field will be able to bring very many suits at this price per case. This again emphasizes the fact that whatever enforcing is done will have to be taken care of by the manufacturers. Their's is the burden and they will have to assume it if the laws are to be really effective. And it is going to cost a deal of money to get enforcement and more to keep it.

LEA-WHEELER AND THE TRADE COMMISSION

Signature by the president late last month put into effect the Lea-Wheeler Act extending and broadening the powers of the Federal Trade Commission. Two very definite things were accomplished by this new law. First, the Commission no longer must prove unfair competition or injury to a competitor and it may proceed on its own motion in the public interest, whatever that much abused term may mean. Definitely, the provision means that such a case as that involving "Marmola" a few years back will be decided quite differently under the new law. In the "Marmola" case, the finding was that while the claims and advertising for the



THE MODERN CONTAINER

ALUMINUM BOTTLES

STRONG, ATTRACTIVE and DURABLE

Entirely impervious to light, a protection for its contents.

Light weight, lowering shipping cost. Breakage eliminated.

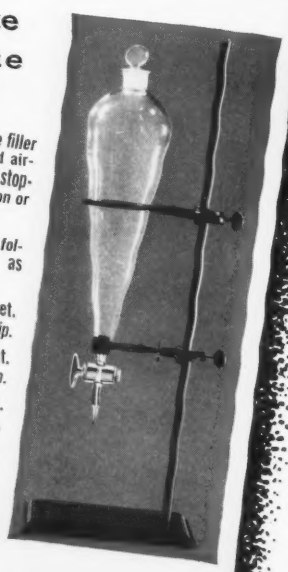
Furnished in sizes from ½ oz. to 5½ gallons.

Manufactured by

AMERICAN ALUMINUM WARE CO.

NEWARK, N. J.

De Luxe Perfume Filler



This attractive perfume filler is made with liquid and air-tight glass stopcock and stopper to prevent evaporation or leakage.

Supplied in the three following sizes complete as pictured here:

500 cc at $9.60 each net. Weighs 8 lbs. ready to ship.

1000 cc at $10.00 each net. Weighs 9 lbs. ready to ship.

2000 cc at $11.25 each net. Weighs 12 lbs. ready to ship.

Each filler supplied in individual shipping box. The 1000 cc size is the most popular and this is carried in stock for immediate delivery.

GLASS PRODUCTS CO.

VINELAND • NEW JERSEY

ATLANTA, GA. Warren M. Curry 2895 Peachtree St.

NEW YORK, N. Y. L. A. Barber 1123 Broadway Room 301

ST. LOUIS, MO. Woodson Barnhart 200 So. Commercial Street

DIAFANE

TRANSPARENT INEXPENSIVE

A Modern Wrap for Drug and Cosmetic Packaging

Diafane is a new transparent wrap, particularly adapted to drug and cosmetic packaging. It is highly moisture-proof, glossy, and is not affected by rapid changes in weather. Diafane may be sealed by heat or glue and works rapidly on standard packaging machinery or by hand. It will save you 40% of the cost of moisture-proof transparent cellulose.

Liberal Samples and Prices Promptly Furnished

Riegel Paper Corporation

342 Madison Avenue, New York, N. Y.

LEARN ADVERTISING AT *Home*

EVERY man and woman in business should take this course. Why? Because it enables you to think intelligently and accurately on advertising problems. Advertising is an interesting study and prepares you to write more effective letters; to acquire a larger vocabulary; to comprehend the sales and merchandising problems of a business, and to be definitely in a position to recommend business development ideas.

Learning advertising at home is the most satisfactory way of acquiring the facts and fundamentals of this profession. Too often in a classroom students forget what the instructor said last week and last month. Talking about advertising problems won't help nearly as much as THINKING THEM THRU—and this can best be done in the quiet of your own home. The Vincent Edwards Course gives you the data on paper, which you have for lifetime reference

Every step in advertising is worked out for you—it is easily the most authoritative—the most interesting —the most complete course available.

Executive and Junior Executives: free explanatory booklet will be mailed to you, if you apply on the letterhead of the company where you are employed.

VINCENT EDWARDS ADVERTISING COURSE

342 Madison Avenue New York City

A SAMPLE of Uranium Ore Fogged a Photographic Plate . . .

In 1898, Becquerel, a French chemist, noticed streaks of light on a photographic plate he had left in a desk drawer with a sample piece of uranium ore. He asked Marie and Pierre Curie to investigate the mysterious properties of the ore sample—and radium was discovered! Once more, an obscure SAMPLE had lighted the way to astounding truth and a blessing to mankind.

Today, samples and sampling play a dominating part in successful merchandising—and Kimble Glass Vials are called upon continuously to serve as the faithful carriers to world markets. They enable manufacturers to include samples of new products within the cartons of old, established ones. They enclose samples of foods, drugs, oils, chemicals, powders, capsules, and salts rushed to every conceivable sales center. And brilliant, retempered walls—practical, versatile closure effects—colorful labelling possibilities—have made Kimble Glass Vials the choice as the permanent package of thousands of top-notch, nationally advertised products. . . . Kimble Vials are available in all standard sizes and types—or can be designed to meet special requirements. Don't decide on your final sampling or packaging "carrier" until you've talked to Kimble. If a vial can do the trick, you'll marvel at the reduction in shipping costs, labor, and sales resistance you can effect!

K
KIMBLE GLASS

• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY . . . . VINELAND, N. J.

NEW YORK • • CHICAGO • • PHILADELPHIA • • DETROIT • • BOSTON

PHARMACEUTICAL NOTES

SULFANILAMIDE—A finely powdered grade now available in addition to the fine crystalline form. If you would like a sample for trial, just write the nearest Mallinckrodt office.

M. C. W.

MAGNESIUM HYDROXIDE—A new Pure grade has been added to our list for those who do not require the exacting specifications of the Magnesium Hydroxide Medicinal. Information and samples are available on both the Pure grade and Medicinal grade.

M. C. W.

An improved grade of MERCURY SALICYLATE for use in oil suspensions has been developed. This product is manufactured to meet the requirements of those firms who offer "mercury in oil" ampoules.

M. C. W.

BISMUTH SUBCARBONATE—Mallinckrodt Bismuth Subcarbonate can be manufactured to meet your specifications. Extremely bulky grades can be supplied for use in powders and suspensions, or medium and dense grades for tablet manufacture.

M. C. W.

MAGNESIUM MANDELATE joins the list of Mandelic Acid salts—Sodium Mandelate and Calcium Mandelate—now offered by Mallinckrodt.

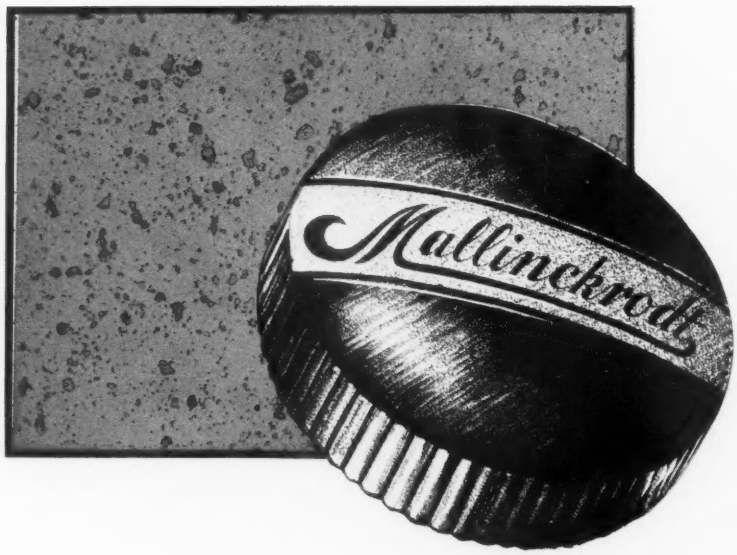
M. C. W.

For Outstanding Pharmaceutical Chemicals, Specify . . .

M. C. W.

MAGNESIUM TRISILICATE

Clinical Reports* Place This New ANTACID and ADSORBENT in the Medical Spotlight



MALLINCKRODT MAGNESIUM TRISILICATE (POWDERED) is now presented after long investigation. It is made to exacting specifications for true therapeutic uniformity. Fine, white, odorless, tasteless and free from gritty particles. Each lot is laboratory tested to meet definite antacid and adsorbent standards. Suitable for use in tablets or powder preparations.

*Mutch, N. *British Medical Journal*
Vol. 1, pp. 143-8 (1936)
pp. 205-8 (1936)
pp. 254-7 (1936)

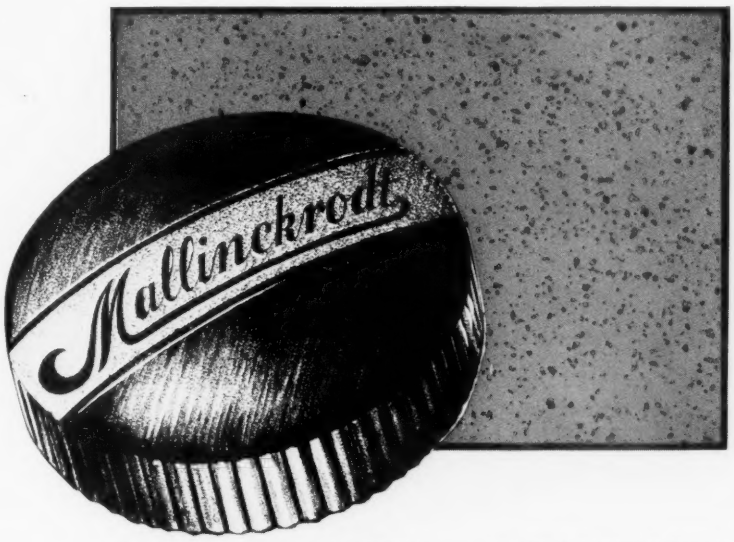
Detailed literature available on request

Mallinckrodt
CHEMICAL WORKS
ST. LOUIS CHICAGO PHILADELPHIA
2nd & Mallinckrodt Sts., St. Louis, Mo.

MAKERS OF FINE CHEMICALS SINCE 1867

MALLINCKRODT IMPROVED STEARATES as ADHESIVE AGENTS for FINE FACE POWDERS

The findings of recent Mallinckrodt research on stearates have been applied to the improvement and standardization of these chemicals whose adhesive qualities have long been used in the manufacture of high quality face powders. Mallinckrodt stearates, made from especially refined stearic acid, are practically free from unsaturated hydrocarbons which so often produce fatty odors. Further purification removes impurities which might be harmful to the skin, so that the finished stearates assure you fine face powders that will be non-irritating and will remain free from rancidity.



STEARATES of ZINC and MAGNESIUM

Send for the Mallinckrodt Industrial-Pharmaceutical Price List

Mallinckrodt

CHEMICAL WORKS

NEW YORK MONTREAL TORONTO

72 Gold Street, New York, N. Y.

MAKERS OF FINE CHEMICALS SINCE 1867

"Why are salicylates, and especially certain salicylates, recommended so highly for creams and lotions to prevent sunburn and suntan?"

The salicylate radical possesses to a marked degree the peculiar property of transforming ultra-violet radiations of certain wave lengths (especially those which burn the skin) into radiations of a different and harmless wave length, thus affording considerable protection from burning and tanning.

M. C. W.

"How do you package 100-lb. quantities of Zinc Sulfate U.S.P. XI?"

Both 100-lb. and 25-lb. quantities are packaged and shipped in the fibre drum containers, which are perfect as bulk stock packages. The lid comes off easily and fits snugly. Drums are light but sturdy.

M. C. W.

"Do you make a barium sulfide suitable for use in a liquid depilatory?"

Due to its lower degree of solubility, barium sulfide is more suited to the paste type of depilatory. For a liquid depilatory, we suggest the more soluble sodium sulfide.

M. C. W.

For Chemicals of Uniform Purity and Strength, Specify . . .

M. C. W.

A New

Swindell stock perfume bottle designed to dramatize **YOUR** *label!*

R 31

Again, Swindell proves it is possible to take advantage of the economy of a stock bottle without sacrifice of distinction or individuality! R 31 is made in the following sizes: 1 dram, 2 dram, ½ oz., 1 oz., 2 oz., 4 oz. Write for samples and prices.

SWINDELL BROS. • BALTIMORE
200 FIFTH AVENUE NEW YORK

When you think of bottles, think of

Swindell

product were probably not in the public interest, there had been no showing that any competitor had been injured because there had been no showing that any competitor existed. Accordingly the Commission was without authority to order "Marmola" to cease and desist anything whatever. Under the Lea-Wheeler Act, the showing of public interest would have been sufficient to warrant a cease and desist order and the Court would not have examined the matter of unfair competition or injury to a competitor either actual or imaginary.

The second principal feature of the new law gives the Commission authority to proceed against the advertising of foods, drugs, cosmetics or devices where claims may be false or misleading in any material particular, either in what is said or what is left unsaid. This is important authority and is almost certain to lead to litigation. "False" and "misleading" are terms which will have to be defined by the Courts, and, of even greater difficulty, the Courts will have to decide in a great many cases whether the omission of certain statements from the advertising has misled buyers of the product.

Commenting on the new law, the very cautious New York *Times* says in effect that it *can* be a fine thing if the Trade Commission uses it with discretion. Everyone will have to agree with that statement but there will be a vast difference in the definitions given to the word "discretion" by such organizations for example as Consumers' Research and the Proprietary Association. What is one man's discretion is likely to turn out as another man's rashness.

FOOD AND DRUG LEGISLATION

The passage of the Lea-Wheeler Act *ought* to make the path of new food and drug legislation an easy one. The principal point in controversy has been removed by placing food and drug advertising in the hands of the Federal Trade Commission. However, Washington scouts report to me that there is likely to be much less Administration push for a new Food and Drugs Act as a result of the Lea-Wheeler enactment. It is believed by some whose advices have always been very close to the mark that a new Drug law will pass the house but get bogged down in the Senate and again fail of passage through lack of time. Others, it is true, predict rapid passage with a minimum of difficulty and industry in general is hoping that the latter view is correct. Everyone would prefer a new law to the uncertainty and suspense of the last four years.

THE STATE OF TRADE

In spite of the recession or whatever you choose to call it retail trade has turned upward sharply during the last few weeks. Also, advertising plans in the drug and cosmetic industries have been stepped up according to a whole long list of agency announcements. Apparently confidence in the future is pretty strong in these industries. At the same time, their buying policies have not been of much assistance to the raw material and supply industries. The latter complain bitterly of hand-to-mouth purchasing and a general deferring of plans for expanded operations and particularly the production of new products. "Hope deferred maketh the heart sick" is very true of the raw material group at the moment. But mid-year and later plans as manufacturers have outlined them to me are likely to make up for the present slackness, especially if retail trade figures continue to present today's bright picture.

THE COLOR PROBLEM

Should there be a new Food and Drugs Act, it will call for certification of all colors used in cosmetics. This, insofar as the American manufacturers are concerned, will be no great matter. They have already organized to determine what colors are needed and have been assured by the certifying authority that prompt action will be taken to certify or reject colors submitted for cosmetic use. In the gamut of coal tar dyes, there are a great many safe and harmless colors which can find cosmetic use, so, should a few of the present range be found unacceptable, no great difficulty will arise. In addition, a year will be afforded in which time, it is certain that American manufacturers will be able to work out the problem most satisfactorily.

However, when we turn to the question of imported cosmetics, we find a somewhat different picture. The law will provide, not for certification of a type of color in general, but that any cosmetic sold in the United States must be colored with dye from a *particular batch* which has been certified. The foreign manufacturer is likely to find this a difficult matter. In some instances, he will undoubtedly be able to import his colors from America and use them under certain restrictions and supervision in the production of his cosmetics for export to America. What will he do, however, if he is located in a country which does not permit coal tar dyes to be imported? Great Britain has such an embargo. Will he be able to have samples of dyes by Imperial Chemical Industries, Ltd., sent here for certification? Or will he have to transfer certain further manufacturing operations, including the addition of his colors to an American plant? It is a most interesting situation and one which is causing both French and British manufacturers a great deal of anxiety. The government here is anxious to cooperate but it is just possible that the new law, when, as and if passed, will not permit the kind of co-operation which the importers would like to have.

PRIZE PACKAGES

I was amazed during the recent prize package contests to find so few cosmetic and drug packages among the prize winners. At Chicago and again in the New York contest, foods and household appliances made a far better showing than did the cosmetic and drug group with one or two conspicuous exceptions. Last year the liquor trade made the best showing with cosmetics a reasonably close second. This year, household appliances were in the lead with both food and liquor doing better than cosmetics and drugs. The industry certainly lends itself to fine packaging. Why is it lagging behind the procession?

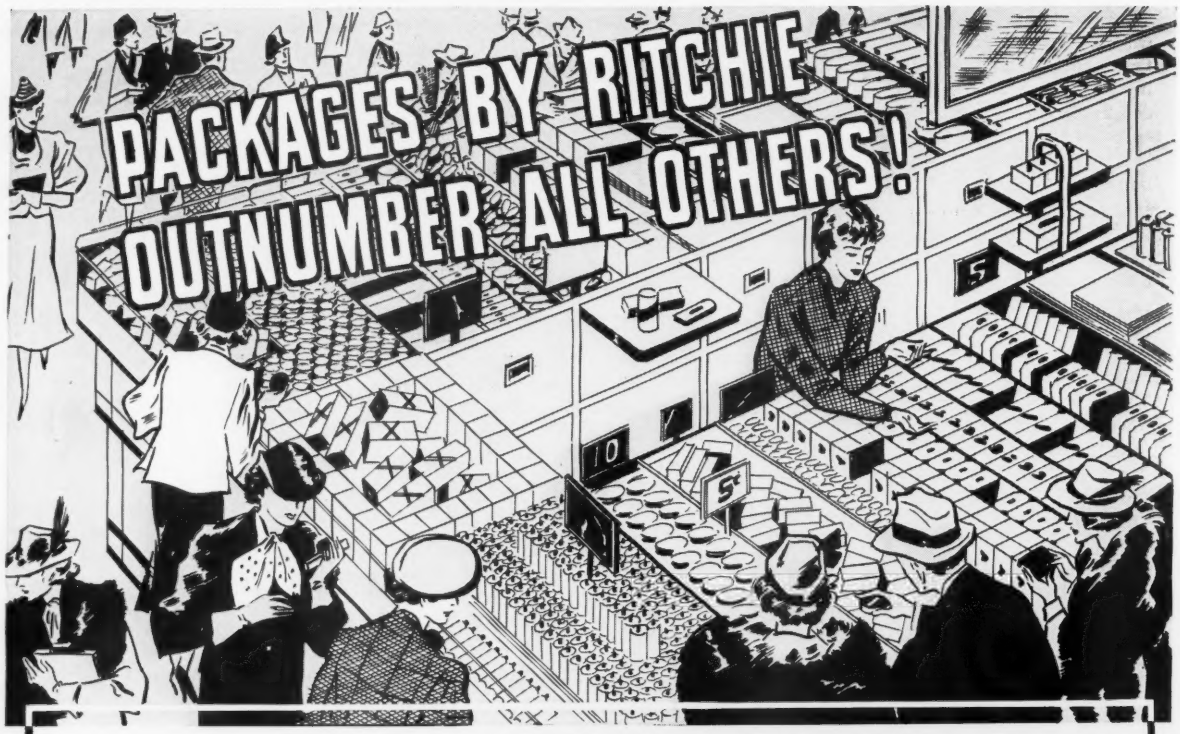
MR. PATMAN AND CHAIN STORES

While Representative Patman's vigorous and rigorous chain store tax bill does not seem to be very close to passage at this session, the gentlemen is campaigning steadily and to my mind very effectively for it over the radio and in the press. Mr. Patman should not be forgotten. There is a certain faculty of commanding support which the gentleman possesses in very great measure. This latest bill of his would come pretty close to providing the finishing blow to a good many chain drug organizations, especially those operated by the little business man for whom Mr. Patman professes so much solicitude. Because his bills are not too close to immediate passage does not mean that there is not a good deal of danger in them. They ought to be studied carefully and fought as vigorously as if they were about to be debated on the floor of Congress. Once they get that far, Mr. Patman is pretty sure of victory. Repeating what I have already said in this column, "Don't underestimate Rep. Patman; get him for you and not agin' you."

THIS CLUB BUSINESS

Booksellers seem to have found a way around Fair Trade by organizing "Book Clubs." You see, these "clubs" are exempt from the provisions of the contracts. So Mr. Macy and some others are operating book clubs to the vast disgust of publishers who have been in the forefront of the price maintenance parade for more years that I can remember. I wonder whether this "club" business could be extended to cosmetics and proprietaries. In principle, the answer of course is "Yes." But in practice, it might be a little hard to work out. At that, there are some pretty good brains among the cutters and you can depend upon it that some of them are working on this proposition.

Where Products Have to Sell Themselves-



"You pay your money and take your choice" at the syndicate store cosmetic counter. No specially trained salesgirls there—no demonstrations—no tested sales talks. *At the majority of such counters you'll find more Packages by Ritchie than any other kind*—and for the same reasons that you find leading products in practically *every* field sold in Ritchie packages!

The same careful consideration of retail outlets—of buying habits—of consumer preferences—that makes Packages by Ritchie so successful in *one* field, is behind a Package by Ritchie in *any* field. The same manufacturing advantages, too—volume production, special machinery, improved methods developed during 72 years of packaging experience. If you want your product to look as distinctive and desirable *to your consumers* as it does to you, dress it up with a *Package that Sells* — by Ritchie.

Set-up Paper Boxes — Fibre Cans

W. C. RITCHIE AND COMPANY • 8847 BALTIMORE AVENUE • CHICAGO

NEW YORK DETROIT CINCINNATI LOS ANGELES ST. LOUIS ST. PAUL DENVER

NEWS

Companies

Remington Medal To Christensen

The Remington Honor Medal for 1938 will be awarded to Henry C. Christensen. for many years secretary of the National Association of Boards of Pharmacy.

Dr. Christensen has been selected to receive this honor because of "his effective work in the National Association of Boards of Pharmacy; in securing of the system of interstate registration of pharmacists; his valuable work in creating and conducting the exhibits on historical pharmacy at the Century of Progress Exposition at Chicago, and the Texas Exposition; and for his many valuable services to pharmacy."

Edna Wallace Hopper Sues for Fees

On March 16, Edna Wallace Hopper United States District Court, Chicago, presented a claim for $200,000 which she says is due her from several cosmetic and beauty product advertisers. Miss Hopper claims that she has never been paid for advertising and promotional work beginning in 1922. The defendents in the suit are: A. H. Diebold; Edna Wallace Hopper, Inc.; Kissproof, Inc.; Neet, Inc.; Louis Philipps, Inc.; Boals Rolls Corp.; Affiliated Products, Inc.; American Home Co.; W. E. Weiss and O. E. Glidden. Mr. Glidden has since died and Affiliated Products has been merged with American Home Products.

F. G. Searle to Europe

F. Gladden Searle, vice-president of Continental Can Co., accompanied by Mrs. Searle, sailed March 26 on the Rex for an extensive business and pleasure trip abroad. Upon arrival at Naples, their itinerary called for visits to Rome, Florence, Venice, Budapest, Vienna, Lucerne, Munich, Berlin, Hague, Brussels, Paris and London. They plan to sail for home from Southampton on May 12.

Stroud Heads Agency

Herbert K. Stroud has been elected president of Mackay-Spaulding Co., Inc., advertising, succeeding Howard E. Spaulding. Mr. Stroud has been active in the drug field for a number of years as an agency executive and as publisher of a trade paper.

Dworkin Heads Committee

Samuel S. Dworkin is chairman of a new American Pharmaceutical Association committee which will collect historical data on American pharmacy. Other members of the committee are Dr. Robert P. Fischelis, secretary of New Jersey Board of Pharmacy, and Dr. Robert L. Swain, president of the American Pharmaceutical Association.

Lilly Award to Dr. White

Dr. Abraham White, assistant professor of physiological chemistry at Yale University, has been chosen by the American Chemical Society to receive the $1,000 Eli Lilly & Co. award in biological chemistry for 1938. The award is made in recognition of Dr. White's work on sulphur metabolism and protein hormones.

The award will be made at the opening session of the American Chemical Society's ninety-fifth meeting in Dallas, April 18. Dr. White will read a paper on "Protein Hormones" before a symposium of the society April 20.

Dr. Richards Gets Bok Award

The annual Edward W. Bok award of $10,000 has been given to Dr. Alfred Newton Richards, professor of pharmacology at the University of Pennyslvania. The award was made in recognition of his research and services to science for a number of years. Dr. Richards is a graduate of Yale. He received his Ph.D. from Columbia in 1910 and since that time has been on the staff of the University of Pennsylvania.

Rusby Awarded Flueckiger Medal

The National German Apothecary Association has notified Prof. Henry Hurd Rusby that the Flueckiger gold medal for 1937 will be conferred upon him at Frankfort-am-Main, Germany, May 29.

Prof. Rusby, who is now eighty-two years old, has had a long and distinguished career as a scientist. He led the fight against adulterated foods and drugs which resulted in the present Pure Food and Drugs Act. He is responsible for the introduction of "cocillane," "bichi," "mire," and "caapi." He has contributed many hundreds of new species and genera to botany and is the author of numerous text and scientific books.

He is a former professor of botany, physiology and materia medica at Columbia University and is dean emeritus of the Columbia College of Pharmacy. In addition he served as dean of the faculty of Columbia and for a number of years headed the medical college of Bellevue Hospital in New York.

He is honorary curator of the Economic Museum of New York Botanical Gardens, chairman of the board of scientific directors and member of the board of managers. He served on the Revision Committees of the Seventh, Eighth and Ninth revisions of the U. S. Pharmacopoeia and as a member of the revision committee of the National Formulary, as chairman of the committee of the Pan-American Association's Medical Congress for the study of American flora.

He is a member of the Pharmaceutical Society of Great Britain; honorary member of the Instituto Medico Nacional of Mexico; president of the Torrey Botany Club; former president of the American Pharmaceutical Association and for a number of years he served the United States government as an expert on drug products in the Bureau of Chemistry, Department of Agriculture.

. . . . For Distinguished Service

Owens-Illinois containers and closures again have been cited for sales-worthiness and outstanding achievement in the 1937 All-America Package Competition.

•

Gold Award in the Glass Container Group was presented to Owens-Illinois for creating the exquisite container and closure for Hirestra Laboratories' Endocreme—the finest example of a *Sales*package in the cosmetic field.

•

Bronze Award in the Glass Container Group was awarded to Owens-Illinois for creating the Taylor Wine Decanter—a reuse container with genuine sales appeal.

•

Another outstanding Owens-Illinois winner was the bulb-shaped container for the Bee-Hive Honey Package of Sherfick Farms, winner of the *Gold Award* in the Closure Division. Other winners were the private mold container used in the Baxter Vacoliter, winner of the *Bronze Award* in the Closure Group and the "cognac shaped" bottle for the Government House Rum package of W. A. Taylor & Company, winner of the *Silver Award* in the Label Division.

Owens - Illinois Salespackages

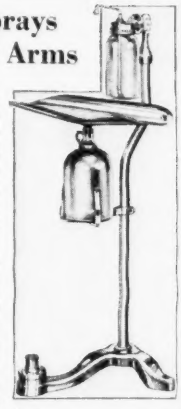
"First in Glass"

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by the U. S. Industrial Alcohol Co.*

ALCOHOL NEWS

April ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1938

New Device Sprays Alcohol Over Arms



A new alcohol dispenser which provides a needle-point shower over a surgeon's arms and hands before he operates is rapidly being adopted by leading hospitals, according to the manufacturer of the device.

"A slight pressure of the foot dispenses an abundance of alcohol in a continuous shower spray which passes from a ½-gallon dispensing jar to a large, stainless steel catch pan, thence to a 1-gallon receiving jar," the announcement states. Advantages claimed include: elimination of waste, splashing, and the danger of hands touching pans or containers.

Assigns Curative Action To Vitamin C Mouth Wash

MOSCOW, Russia—Clinical tests indicate that the use of mouth wash fortified with vitamin C (concentrate of dog-rose fruits) has prophylactic and even curative (paradentosis) action, it was claimed in a recent report published here.

Experiments showed, it was pointed out, that with the observance of proper precautions, a product could be made which would retain its potency over several months.

The experimenter stated that pure alcohol, pure glycerol and coloring matter did not affect the stability of the vitamin C. Oxidation, daylight, temperatures of 40 deg. C. and higher, and impure glycerol did, however, cause decomposition. On the other hand, benzyl alcohol and peppermint oil were found to exert a strong preservative action.

Report 95% Alcohol Aid In New Skin Treatment

CHICAGO, Ill.—Subcutaneous injection of small amounts of 95% alcohol elicited tissue changes of value in the treatment of pruritis vulvae and chronic inflammatory lesions of the skin, it was announced here by Dr. W. A. Wilson in a recent issue of the "Journal of the A. M. A."

Explaining why alcohol has this effect, Dr. Wilson points out that it first induces degenerative changes in the subcutaneous nerve fibers, resulting in a cutaneous anesthesia which persists until regeneration occurs.

Secondly and probably more important, he continues, are the changes activated in the vascular and reticulo-endothelial system which result in a rapid mobilization of polymorphnuclear leucocytes and histocytes which act to repair the inflammatory process.

Alcohol In Cooling Mixture

A liquid cooling mixture for preserving perishable foodstuffs by rapid freezing is composed of 20-40% pure glycerine, 20-40% ethyl alcohol and 25-45% water, according to a recent patent. Meats, fruits, fish, etc., are immersed in this mixture, cooled to at least minus 30 deg. C.

Greater Markets for Anhydrous Alcohol Developed During 1937

Uses for 200 Proof Alcohol Ranged From Relief of Cancer Pain to Helping Racing Cars Set New Records

Events moved swiftly in 1937 to emphasize the growing importance of both absolute and anhydrous denatured ethyl alcohol as aids to science and industry. Helping to relieve cancer pain, providing better wave sets for women, improving the stability of drug solutions, raising the quality of artificial leather and lacquers, making possible advanced methods of vitamin manufacture, and as an automobile anti-freeze as well as a fuel for powering racing cars were but a few of the ways in which these products proved their advantages last year.

As the largest manufacturer of 200 proof ethyl alcohol, the U. S. Industrial Alcohol Co. found this evidence on many fronts an indication that there are yet many unexplored applications for this product.

In Separation Processes

One of the most interesting examples of how anhydrous alcohol made possible new advances was in the manufacture of vitamin G, where it was found that the differential solubility of flavin, filtrate factor and anti-pellagric factor in aqueous alcohol and anhydrous alcohol made isolation of the individual components possible—indicating the importance of proper alcohol strength in various separation processes.

Another advantage for absolute alcohol was seen in its ability to improve the stability of the drug solutions Lobelia inflata, Cinchona, Atropa belladonna, Valeriana officinalis, Convallaria majalis and Cannabis sativa. Investigators reported that absolute alcohol solutions were more stable than aqueous alcohol, both with or without exposure to light.

In the artifical leather, varnish and lacquer fields it has, of course, been known for some time that anhydrous alcohol has outstanding blending features as compared with 190 proof

(Continued on next page)

Leon Pfeifer Retires; U.S.I. Manager 18 Years

NEW ORLEANS, La.—Leon Pfeifer, manager of U.S.I.'s New Orleans division since 1916, retired from active sales work on March 1 under the U.S.I. retirement plan. He will, however, continue to attend to many matters of great importance to the Company.

Leon held numerous responsible positions over a period of 33 years.

Leon Pfeifer

He served as secretary and treasurer of the International Distilling Co. in 1903. Subsequently, he became president of the U. S. Industrial Alcohol Co. of Louisiana. In this post and other ones he carried forward the fight to have industrial alcohol plants enjoy the same privileges granted other industrial units.

In later years he was vice-president of the International Distilling Co. and the Louisiana Distilling Co., then U.S.I. subsidiaries.

J. L. Rivet Succeeds Pfeifer

J. L. Rivet, well known to alcohol buyers in the Southern territory where he has served for many years, was appointed sales manager of the New Orleans division effective March 1st. Mr. Rivet succeeds Leon Pfeifer, retired.

ANHYDROUS ALCOHOL entered many new fields and made important advances in established markets during 1937. Some of the applications in which its special properties were used were: Spirit varnishes, drug solutions, medicine, women's wave sets, fuel and anti-freeze for automobiles, and vitamin manufacture.

ADVERTISEMENT—*This entire page is a paid advertisement.*

April ★ **ALCOHOL NEWS** ★ 1938

Kentucky Repeals Non-Beverage Alcohol Tax For Special Licensees

LOUISVILLE, Ky., March 7—Passage of House Bill No. 129 by the state legislature today repealed the $1.04 per gallon state tax levied on purchases of non-beverage alcohol by special licensees in Kentucky.

Special licenses issued by the Distilled Spirits Administrator include (1) Special Non-Beverage Alcohol Vendor's licenses, (2) Special Industrial Alcohol License, and (3) Special Non-Industrial Alcohol License.

Special license fees are $2.00 per year.

Classification (2) authorizes "the holder to purchase alcohol only from the holder of a Distiller's License or special Non-Beverage Alcohol Vendor's License and possess alcohol for use in the manufacture and sale of any of the following products, when they are unfit for beverage purposes, namely:

(a) Denatured alcohol produced, used, and sold pursuant to Act of Congress and regulations promulgated thereunder.
(b) Patent, Proprietary, medicinal, pharmaceutical antiseptic, and toilet preparations.
(c) Flavoring extracts, syrups and food products.
(d) Scientific, chemical, mechanical, and Industrial products."

A Special Non-Industrial Alcohol License for federal tax-free permittees entitles the holder to purchase alcohol in Kentucky only from the holder of a Special Non-Beverage Alcohol Vendor's License and to use same only for non-beverage purposes.

Markets For Anhydrous Alcohol Expand in 1937

(Continued from previous page)

alcohol, especially where shellac or resins must be formulated with nitrocellulose. However, 1937 found more manufacturers investigating the merits of anhydrous Specially Denatured Alcohols 1 and 23-A. Besides these three, any S. D. Alcohol may be secured from U.S.I. in anhydrous form.

Recent experiments also showed that Ansol M®, an anhydrous denatured alcohol solvent, gave natural resin solutions of lower vicosities than any denatured alcohol or alcohol-type solvent studied. Again, in the lacquer field, at least one patent for an emulsion type lacquer employed absolute alcohol to secure a more stable emulsion.

Relieves Cancer Pain

Absolute alcohol also proved its service to relieve human suffering in 1937 as the Journal of the A. M. A. described clinical trials in which injection of absolute alcohol was found to be the most effective method for alleviating pain resulting from carcinoma of cervix. Absolute alcohol, it was explained, is light enough not to mix with the spinal fluid, yet definite in its action on nerve tissue without producing toxic effects.

Out of the various applications developed for absolute alcohol in the drug and cosmetic fields, two in 1937 shared attention. Use of water-free alcohol in the preparation of karaya gum concentrates for wave sets has the effect of lengthening their shelf life because the absence of swelling of the gum (from water) makes dispersion at any time easy, it was stressed by the chemist for a leading gum importer.

Good success has also been obtained with absolute alcohol and ether as solvents for balsam of tolu and gum benzoin employed for pill varnishes.

The growing importance of beta keto compounds and the production of a number of esters are also making for greater consumption of anhydrous alcohol by the chemical industry. Increased reaction speeds and higher yields continue to dictate the use of the water-free product in synthesis.

Widespread use of higher proof, quality type anti-freeze and the adoption of alcohol-gasoline blends for automobile racing in this country provided another exciting chapter in the 1937 record for anhydrous alcohol. Alcohol fuel blends emerged with outstanding performances under grueling conditions at the famous Roosevelt Raceway on Long Island.

U.S.I. welcomes the opportunity to give more detailed information regarding a particular application for 200 proof alcohol.

Artificial Perspiration Used In Tests on Silk

Artifical perspiration may be made on the following formula, according to a recent issue of "Silk and Rayon":

	Grams per liter
Sodium chloride	3.5
Potassium chloride	0.5
Ammonium chloride	1.5
Urea	2.5
Glucose	0.15
Lactic acid	3.0 ml.
Hydrochloric acid (2N)	5.0 ml.

This formula (pH 5.0) was used in a recent study of the effect of perspiration on delustered silk hose.

Study Shaving Factors; Advise Alcohol Lotions

Use of an antiseptic lotion of either 50 or 70% alcohol strength is recommended in a recent study of all the factors involved in shaving.

Relative merits of both lather and latherless creams are also discussed in the study which outlines the causes of unsatisfactory shaving and suggests how to avoid them.

®Trade Mark registered in this country.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

Complete masking of formaldehyde odors is claimed for nine new perfume specialties. Each odor type is a complex mixture of pure essential oils and aromatic chemicals, ready for instant use, in the proportion of one-half ounce to a gallon of 40 per cent formaldehyde, the manufacturer states. **(No. 80a)**

U S I

A new adhesive in paste form, said to bond paper to water-proofed fabrics, is now available. It will also make labels adhere to cans and paper to waxed surfaces, according to the manufacturer. **(No. 81a)**

U S I

A neutral wedge photometer for use in precise determination of micro and macro quantities of many organic substances, in drugs, insecticides and other products has been placed on the market. It is reported similar to the apparatus developed in the laboratories of the Food and Drug Administration and in some cases said to be sensitive to as little as ten billionths of a gram. **(No. 82a)**

U S I

Mildew-proof mill white paint said to contain a non-yellowing fungicide which kills the parasitic spores yet does not affect the brushing or smoothness of the finished film, was announced recently. According to the manufacturers, the paint is particularly suited to plants operating under high temperatures and humidity. **(No. 83a)**

U S I

Perfumed shower baths with softened water can now be secured by inserting a special fitting in the water line, according to a recent announcement. Tablets with three different fragrances are available for use in the fitting, it is said. **(No. 84a)**

U S I

A new paint deodorant is described as a "compound of pure aromatic chemicals and essential oils which imparts a definite and permanent odor-neutralizing effect." It is said to dissolve readily in all paint mixtures in the recommended proportions of one pound of deodorant to 2,800 pounds of the average paint mixture. **(No. 85a)**

U S I

An automatic two-stream filling machine for cold cream, salve and other semi-liquids will fill up to 150 containers per minute without drip or waste, according to the manufacturer. The machine is described as having a variable speed drive with hand-wheel control, range shift, speed indicator and automatic safety stop. **(No. 86a)**

U S I

A new detergent, wetting and dispersing agent, said to be particularly effective where resistance to formation of insoluble soaps or stability to acid or alkali is a requisite, has been introduced. As little as 0.2% dissolved in water and shaken will form considerable quantities of foam or suds, the manufacturer states. **(No. 87a)**

U S I

Sterlized adhesive tape is now available following the development of new adhesive compounds which make it possible for live steam at a temperature of 240 deg. F. to be used on the tape, a recent announcement states. **(No. 88a)**

Ethyl alcohol can be used in a rapid determination of the moisture content of soils containing up to eleven per cent organic mater, according to **Soil Science.** After extracting the water with alcohol, the remaining alcohol is burned (drying the soil at the same time), the article states. Moisture of sands can be determined in 5-10 minutes and clays within 35 minutes.

U.S. INDUSTRIAL ALCOHOL CO.

WORLD'S LARGEST PRODUCERS OF INDUSTRIAL ALCOHOL

ETHYL ALCOHOL

SPECIALLY DENATURED-*All Formulas* • COMPLETELY DENATURED-*All Formulas* • ANHYDROUS-*Denatured* • ABSOLUTE-*Pure*

SOLOX-*The General Solvent* • U. S. I. DENATURED ALCOHOL • SUPER PYRO *Anti-Freeze*

PURE (190 PROOF) TAX PAID—TAX FREE

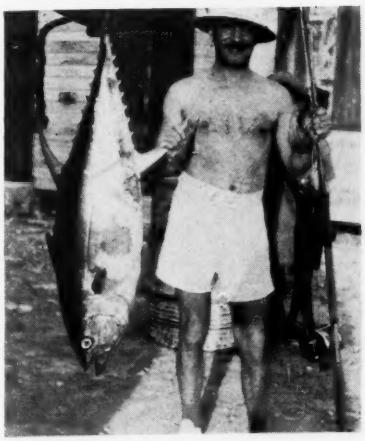
U. S. I.—U. S. P.-*Ethyl* • WEBB'S-*Ethyl*

Executive Offices: 60 East 42nd Street, New York, N. Y. Branches in all Principal Cities.

Mayham With World's Fair

S. L. Mayham, well known in this industry and contributor to THE DRUG AND COSMETIC INDUSTRY, has been appointed account executive for the cosmetic industry for the New York World's Fair 1939.

Firstenberg Lands Big One



While vacationing in Florida, Fred R. Firstenberg, president of First Machinery Corp., New York, caught a 235-pound tarpon, shown above.

Return To France

The Comte and Comtesse Jean de Polignac sailed for home on the Ile de France, March 18, after several weeks in this country. During that time the Comte was looking after his various interests in this country including the business of Parfums Lanvin. In this connection, he was host at a cocktail party at the Hampshire House, on March 9, which was attended by many members of this industry as well as by beauty and fashion editors.

He spent much of his time at the offices of Maurice Levy, Inc., New York, American representative of Parfums Lanvin.

The Comtesse, who is the daughter of Madame Lanvin, famous *couturiere*, is a distinguished amateur musician whose work is well known in Paris, London and New York.

Aizic Visits Here

Iuliu Aizic, director of La Parfumerie Ravel S. A., Bucarest, leading Rumanian perfume manufacturer, is in this country. Mr. Aizic, who is the son of the owner of the company, is investigating conditions in this country with the idea of entering the American market.

Jelly Returns from Vacation

Walter H. Jelly of W. H. Jelly & Co., Inc., has returned to Chicago from a vacation spent at Hot Springs, Ark.

Dr. Guenther's Movies

Fritzsche Brothers, Inc., New York, presented the first public showing of Dr. Ernest Guenther's colored motion pictures filmed during his recent survey of essential oil and spice production in Africa, on March 24 at the New York Athletic Club.

Last year Dr. Guenther's investigations were directed toward Africa as shown by the titles of his films: Essential Oil Production in Morocco; Essential Oil Production in Kenya Colony; Zanzibar's Clove Industry; Production of Vanilla, Cloves and Clove Oil in Madagascar; Production of Ylang-Ylang and Pepper in Nossi-Be and Production of Oil of Geranium, Vetiver and Ylang-Ylang in Reunion Island.

Fretz Marries

Nathan R. C. Fretz of Dodge & Olcott Co., New York, has surprised his friends by announcing that he was married March 19 to Eunice Farnsworth Patten. The ceremony took place in the Chapel of the Collegiate Church of St. Nicholas, New York. Mrs. Fretz, formerly of Skowhegan, Me., is the daughter of Roland T. Patten, secretary to Congressman Clyde H. Smith of Maine and formerly a newspaper editor and publisher.

Mr. Fretz has been associated with Dodge & Olcott Co. for a number of years as special representative for the products of Fabriques deLaire and other perfume materials handled by the company.

Leon Antoine Chiris Visits Here

Leon Antoine Chiris, administrateur-delegue of Etablissment Antoine Chiris, Grasse, France, arrived in New York, April 4 on the Queen Mary. Mr. Chiris who is chairman of Antoine Chiris Co., New York, will spend about six weeks in this country.

Jean Desprez Returns To Paris

Jean Desprez, managing director of F. Millot, Paris, returned home on the Ile de France, March 18, after having spent ten days with his American representative, F. Millot, Inc., New York.

Kramer Returns from Trip

Robert A. Kramer of the Th. Goldschmidt Corp., New York, has just returned from an all-air trip which took him to the principal cities of the Middle West and South.

Colgate Advances Reilly

J. A. Reilly has been appointed sales manager of the soap department of Colgate-Palmolive-Peet Co., Jersey City. He has been connected with Colgate for sixteen years and for the past two has been assistant sales manager of the soap department.

Spitaleri on Perfuming

Frank Spitaleri, perfumer of Felton Chemical Co., gave an interesting talk on "The Application and Formulation of Perfumes in Brilliantines, Lipsticks and Mascaras" at the Brooklyn College of Pharmacy, March 24.

N. E. Tube Appoints Dunn

T. C. Sheffield, western division manager of the New England Collapsible Tube Co., Chicago, has announced the appointment of C. H. E. Dunn as representative for the company in Los Angeles and Southern California. Mr. Dunn's offices are at 6331 Hollywood Blvd., Los Angeles.

Dr. Griffith Appointed McNeil Consultant

McNeil Laboratories, Philadelphia, has made arrangements with Dr. Ivor Griffith, Dean of Pharmacy at the Philadelphia College of Pharmacy and Science, and Professor of Pharmacy at the same institution, to act as consultant and director of the McNeil Research Division.

Ogint Joins Nature's Ray Lab.

Adam Ogint has joined Nature's Ray Laboratory, Hollywood, as chief chemist. The company has taken larger quarters at 1112 N. Vine st., that city, where it will

ADAM OGINT

carry on increased biological research work, under the direction of Adam Ogint.

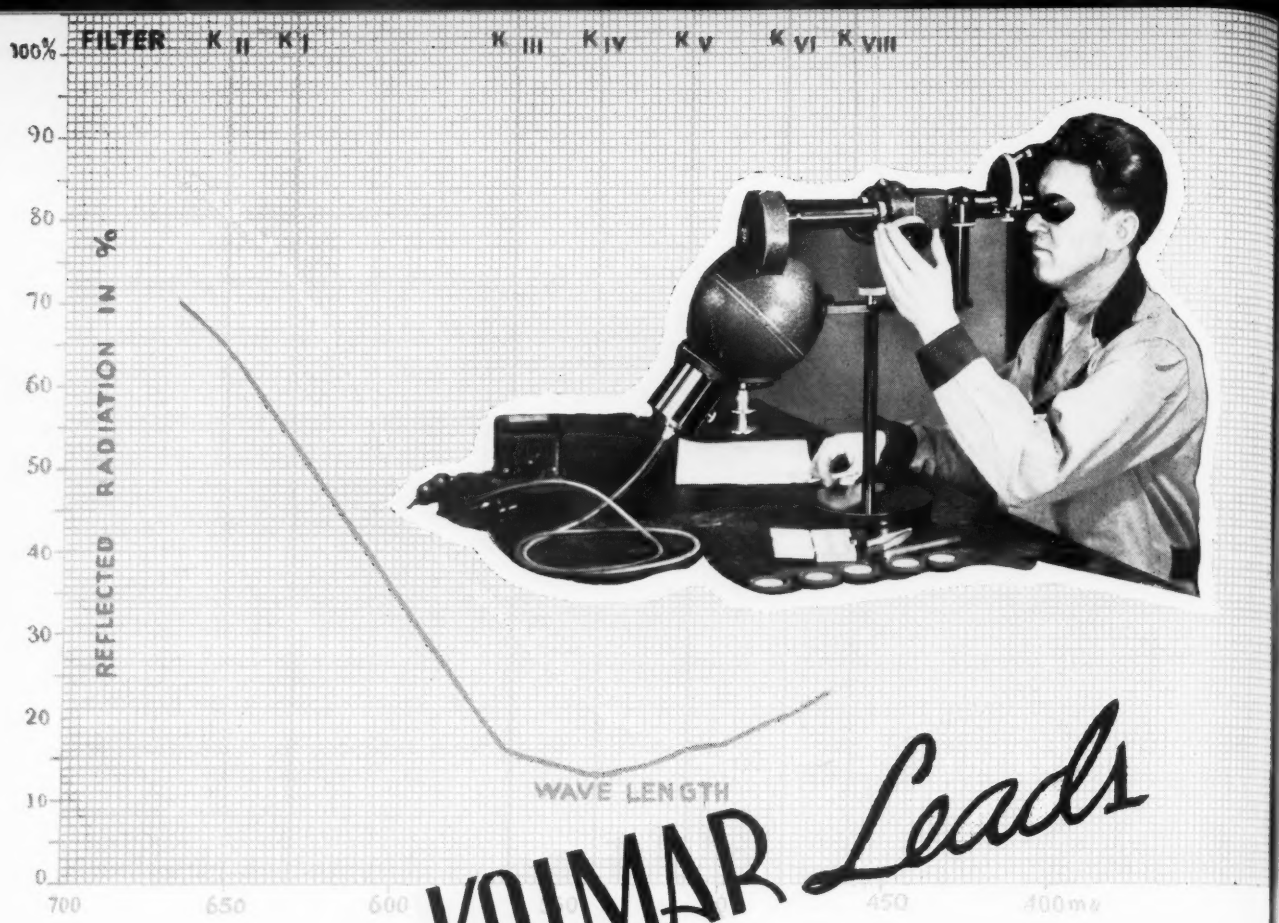
Michael Ryan is manager of the laboratory and Miss V. M. McDonnell is secretary and treasurer.

Parise Now Sole Owner

James Parise is now sole owner of the Florentine Perfume Manufacturing Co., 1479 East Congress st., Detroit, which was formerly owned by him and M. Spires.

Mennen Appoints Jorda

Joseph Jorda has been appointed assistant export manager of the Mennen Co., Newark, N. J. He was formerly associated with the Gillette Safety Razor Co.



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in scientifically matching all shades of rouge and other make-up products by means of the most accurate machine known to the industry » »

Color variation has always been a cosmetic merchandising problem. Now, we have entirely eliminated this difficulty for Kolmar customers . . . Every rouge shade is scientifically measured for dominant hue in millimeters and percentage of saturation and brilliance, by the Photometer, shown above. These measurements are charted. The resultant curve is retained as an unchanging record with which every shade may be perfectly reproduced at any time . . . Although we retain master samples, which we know will fade and change under most ideal conditions, we find it unnecessary to refer to them... We, of Kolmar Laboratories, are proud to lead the way in elimination of shade variation as we have in solution of other cosmetic problems. We proudly offer Kolmar customers the certainty of *color reproduction with no possibility of variation.*

Write today for samples of Kolmar Atomated Smooth-as-Silk Rouge. THE FINEST ROUGE PRODUCED, available in over 250 shades.

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Manufacturers of cosmetics for private label brands only. We never compete with our clients. We also protect the interests of our trade with Products Liability Insurance.

There is a Kolmar Representative in or near your community.

M. C. BOYD, 100-108 River Street - - - - - - Hoboken, N. J.
WARREN CURRY, 2895 Peachtree Rd. - - - - - - Atlanta, Ga.
NORMAN KOLE, 11-108 Merchandise Mart - - - - Chicago, Ill.
R. G. F. BYINGTON, 1708 W. 8th St. - - - - Los Angeles, Cal.

Walker Heads Comm. Solvents

Major Theodore P. Walker has been elected president of Commercial Solvents Corp., succeeding the late William D. Ticknor. Major Walker has been associated with Commercial Solvents Corp. since 1922. In 1924 he was elected a vice-president and in 1928 executive vice-president. He was made a member of the board of directors in 1933.

The other officers are: vice-presidents, E. L. Pangborn, H. W. Denny, W. A. Burton, C. L. Gabriel, H. E. Perry; treasurer, T. F. Carty; secretary, A. R. Bergen and controller, A. H. Braun.

Tab-ex Cosmetics

Tab-ex Corp., Chicago, is a new company in the cosmetic field, marketing cleansing cream and nail polish remover in pad form.

Kuhne Libby's 50th Anniversary

Kuhne Libby Co., New York, celebrated the fiftieth anniversary of the founding of the company on March 29.

General Plastics to Make Phenol

A new plant for the production of synthetic phenol will be erected by General Plastics, Inc., North Tonawanda, N. Y. The plant which will cost approximately $500,000 is expected to be ready some time in December.

Kidder Heads National Drug & Chem.

A. H. Elder has been elected president of the National Drug and Chemical Co. of Canada, Ltd., Montreal, succeeding the late E. G. Jackson.

Merrell Reelects

The following officers of the W. S. Merrell Co., Cincinnati, have been reelected by the board of directors: Charles G. Merrell, chairman of the board; Thurston Merrell, president and general manager; Lee Wiltsee, vice-president and treasurer; A. E. Joering, secretary, and W. J. Ransom, assistant treasurer.

Fowler Heads Schramm-Johnson

H. Tracy Fowler has been appointed president of the Schramm-Johnson Drug Co. and the Walgreen Drug Co. of Utah, Salt Lake City. He succeeds the late Joy H. Johnson.

Sakele Adds New Products

George A. Sakele, Miami Beach, Fla., has added a new group of sun tan products to his collection of beauty aids and perfumes. The new group includes a cream, face powder and lipstick.

Tanzi Engineering Moves

Aurelio Tanzi Engineering Co., has moved its office, showroom and factory to larger quarters at 430 Jefferson st., Brooklyn, N. Y.

Beeman Surprise Party

George W. Beeman, president of Beauty Counselors, Inc., was given a surprise party March 21 in the offices of the company in the Penobscot Building, Detroit, in celebration of the seventh anniversary

GEORGE W. BEEMAN

of the founding of Beauty Counselors, Inc. A birthday cake was cut for all the office employees and on a nearby desk were piled hundreds of orders representing the largest day's business in the history of the company. According to Mr. Beeman the company's business is 50 per cent. ahead of last year's for the same period.

Felton Branch in Los Angeles

Felton Chemical Co., Inc., Brooklyn, N. Y., has opened a direct factory and sales branch in Los Angeles. The entire building at 4727 W. Washington Boulevard has been leased for a number of years, and in addition to offices and salesroom, has been equipped to manufacture locally a large number of well-known Felton products.

The West Coast branch is under the management of Robert E. Felton, who will personally contact the trade in and about Los Angeles and Southern California. Philip A. Weinrobe will cover San Francisco, northern California, Oregon and Washington.

Monsanto Reports to Employees

Monsanto Chemical Co. has issued a special edition of its annual report for the benefit of its employees. The purpose of the report is to acquaint the employees with the financial structure of the company. It explains in simple form what the stockholders contribute to the business, and points out that for each person employed by the company there is a capital investment of $10,000, and that for each $10,000 invested in the business last year $366 was paid in dividends to stockholders whereas $1200 was paid out in salaries. It shows what the effect of the depression was and explains what is being done to offset depressions as they occur. Another interesting feature of the report is a section devoted to short biographies of each of the Monsanto directors. Copies are available upon request.

Stumpf & Nelson Merger

Stumpf & Nelson Drug Co. and Wisconsin Pharmacal Co., both of Milwaukee have merged and in future will be known as the Stumpf & Nelson Co. William K. Stumpf is president, John Nelson, vice-president and Irwin J. Stumpf, secretary-treasurer. E. G. Raeuber, secretary and manager of the Wisconsin Pharmacal Co., is associated with the new firm.

Swing Joins Pfaltz & Bauer

Pfaltz & Bauer, Inc., New York, has announced that R. J. Swing is now associated with the company in the fine chemical department. Mr. Swing has had many years of experience as western sales manager for J. T. Baker Chemical Co., and as manager of the BTA Division of General Chemical Co. During the past few years he has done special work in the rubber industry with the Naugatuck Chemical Division of U. S. Rubber and Charles T. Wilson Co.

Chiris and Pilar Exchange Interests

An exchange of interests has been effected between Etablissements Antoine Chiris and Pilar Freres, both of Grasse, France. Leon Antoine Chiris, who is now in this country, states that no changes are planned at the present time which would affect the name or personnel of either company.

Mary Pickford Cosmetics

Mary Pickford Cosmetics, Inc., has opened offices at 551 Fifth ave., New York. Mary Pickford is president of the new company and Harold J. Emptage is vice-president and sales manager. Mr. Emptage has resigned as general manager of the Jergens-Woodbury Sales Corp., Cincinnati, a position which he had filled during the last seven years of his seventeen years' connection with that company.

Squibb Appoints Maguire

E. R. Squibb & Sons, New York, has appointed T. I. McGuire divisional manager of the Western division with headquarters at Kansas City. He was formerely district manager in the Pacific Northwest for the company.

Magnus Appoints Tribble

Talmadge B. Tribble has been appointed general manager of the midwestern division of Magnus, Mabee & Reynard, Inc., with headquarters in Chicago. Mr. Tribble was formerly sales manager in the New York area for Sharp & Dohme, Inc., Philadelphia.

Motodent Moves

The offices of Motodent, Inc., manufacturer of an electric tooth brush, have been moved to 115 West Seventh st., Los Angeles.

Colloidal Pharmacal Co.

Colloidal Pharmacal Co., 580 Fifth ave., New York, with laboratories in Newark, N. J., is headed by J. F. Gillespie, who, three years ago, organized the Colloidal Laboratories of America. The company has an exclusive contract with the Colloidal Corporation of New Jersey for the distribution of all consumer products produced by that organization.

The first product introduced is "Aknasol," a colloidal sulphur lotion for the treatment of acne and other skin disorders. The second colloidal product will be colloidal copper, which has been found specific in the treatment of athlete's foot.

Aridor Personnel Changes

The board of directors of Aridor Co., Chicago, has elected Robert G. Peck, Jr., to the office of vice-president. R. Bruce MacFarlane, who has been connected with the company for six years, has resigned as vice-president and sales manager, and is now associated with Anchor-Hocking Glass Corp., Lancaster, Ohio.

Gilbert R. Barton, for several months Aridor's Cleveland representative, has been transferred to St. Louis. His offices are in the Railway Exchange, there, and he will cover Missouri and Iowa.

John J. Toffey, Aridor's Cincinnati representative, is now covering the states of Ohio and Kentucky, and Ralph H. Johansen, (of Package Supply Co.), 556 North Prior Ave., St. Paul, is covering Minnesota.

Polak's Frutal Price List

Polak's Frutal Works, Inc., Long Island City, N. Y. has issued a new price list and catalogue for 1938. A very neat and orderly booklet printed in blue ink, it has sections devoted to Essential Oils, Terpeneless Oils, Aromatic Chemicals, Perfume Bases, Flavoring Materials, Ethers, etc. Copies are available upon request.

Stuart Products in N. Y.

Stuart Products, Inc., St. Paul, has opened an office and showroom at 347 Fifth ave., New York. The showroom decorations were designed by Robert Karoff, president of the company who is also the creator of all Stuart Products packages. James J. Griffin, eastern sales director, is in charge of the New York office.

Lydia Pinkham Sales Up

Sales in the United States of products manufactured by Lydia E. Pinkham Medicine Co. during the year 1937 showed an increase of 15.1 per cent. over the previous year. Canadian sales increased 12.4 per cent. and foreign sales 12.8 per cent.

Peterson & Kleinschmidt Join Stearns

Dr. Joel B. Peterson and Dr. Earl E. Kleinschmidt have become members of the scientific staff of Frederick Stearns & Co., Detroit.

Dr. Peterson, who is to be director of chemical research, comes to Stearns from the chemical laboratory of the American Medical Association where for fifteen years he was intimately associated with

DR. J. B. PETERSON

the work of the Council on Pharmacy and Chemistry. Previous to that he was a member of the teaching staff of the department of chemistry of the University of Wisconsin.

Dr. Kleinschmidt will work with Dr. Lloyd L. Ely on the medical problems which confront the scientific manufacturer of therapeutic agents. He is a graduate of the College of Medicine of the University

DR. E. E. KLEINSCHMIDT

of Michigan where, in addition to his M. D. degree, he also received the degrees of B. S., M. S. and Doctor of Public Health. Since his interneship, Dr. Kleinschmidt has been in private practice of internal medicine, Medical Director of the Ann Arbor Public Schools, Editor of the Bulletin of Michigan Association of School Physicians, Associate Editor of the Bulletin of American Association of School Physicians, and since 1932 Professor of Hygiene and Public Health at the University of Michigan.

Ringgold Heads Loeser Lab.

David Loeser, founder and vice-president of Loeser Laboratory, Inc., New York, has announced that Rowland C. Ringgold, assistant sales director in charge of the wholesale division of Sharp & Dohme, Philadelphia, has become president of Loeser Laboratory, Inc., manufacturer of intravenous ampoules and other pharmaceutical specialties.

The company has moved to larger quarters at 27-43 West 28 st., New York, and plans to purchase other ethical specialty houses and to develop new products.

Stokes Widens Williams Territory

The Williams Sales Co., Cincinnati, which has represented the F. J. Stokes Machine Co., Philadelphia, for a number of years in Cincinnati and parts of Kentucky has been appointed to represent the company in all of Ohio, Kentucky, and parts of Indiana.

Stokes Appoints Butcher

F. J. Stokes Machine Co., Philadelphia, announces the appointment of L. H. Butcher Co., Los Angeles, as western representative for all Stokes equipment. The company, which has handled the Stokes line out of its San Francisco and other offices for a number of years, now represents Stokes in Washington, Oregon, California, Idaho, Nevada, Arizona, Utah, Montana and Wyoming as well as in British Columbia.

C. F. Raphael, chief engineer with the Butcher Co., recently attended a sales conference of Stokes representatives in Philadelphia and spent considerable time inspecting installations of Stokes pharmaceutical, chemical processing and other equipment in the east.

Monsanto Elects

The following have been elected members of the board of directors of Monsanto Chemical Co., St. Louis, for the ensuing year: Edgar M. Queeny, J. W. Livingston, Charles Belknap, Theodore Rassieur, Gaston Du Bois, G. Lee Camp, and Walter W. Smith, all of St. Louis; William M. Rand of Everett, Mass.; L. F. Nickell of London, England, and John C. Brooks of Springfield, Mass.

The present officers of the company have been re-elected and in addition John C. Brooks of Springfield, Mass., was elected a vice-president. The officers are: Edgar M. Queeny, president; Charles Belknap, executive vice-president; Gaston Du Bois, G. Lee Camp, John W. Livingston, William M. Rand, Russell John Hawn, and John C. Brooks, vice-presidents; Victor E. Williams, J. A. Berninghaus, L. F. Nickell, Lynn A. Watt, Osborne Bezanson, Harvey M. Harker, and

The Explorer

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THE SCOPE of the chemist's research covers the whole earth. The results of his research benefit all mankind. Yet he works within the four walls of a laboratory. In the field of manufacturing pharmaceuticals, it is his job to keep tonnage production geared up to laboratory standards of accuracy. He knows no compromise. His job is not merely one of compounding, but of testing every ingredient.

Because of his work, thousands of pharmaceutical products are available today; they are bought with implicit faith. The investments of millions of dollars behind well-known trademarks are protected by his ideals.

This man's standards are those which have inspired the J. T. Baker Chemical Co. throughout the thirty years of their producing C. P. Analyzed Reagents. This man's requirements led Baker into the making of Fine Chemicals—measured purity by the ton.

Baker enjoys the confidence of hundreds of such men. They know Baker standards are their standards; they know that Baker representatives speak their language. We would welcome the opportunity to demonstrate in a practical manner how Baker's Fine Chemicals can help solve your manufacturing problems.

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A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

- Alkali Bromides
- Potassium Iodide
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- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
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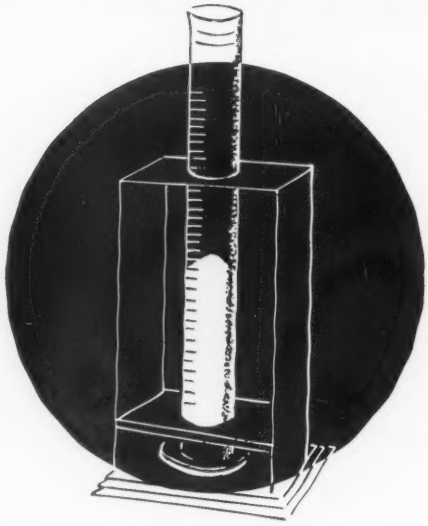
Baker's fine chemicals

for Pharmaceutical Manufacturers

QUALITY!
in Precipitated Chalk

VITAL!
to a Good Dentifrice



Two things the chemist must be sure of in PRECIPITATED CHALK, to make a permanently fine dentifrice . . .

He must be able to rely implicitly on the chemical *purity and physical uniformity of the chalk.*

Many years experience with its use has convinced chemists that they are safe with Sturge's Standard Chalk.

The world's finest material goes direct to Sturge. Every ounce of Sturge Chalk will pass the tests of the British and United States Pharmacopoeias. By a special process of manufacture, the alkaline *reaction is so reduced that the finished chalk gives* no pink coloration when phenolphthalein is poured on it.

All Sturge's Standard Chalk is free from grit. Every particle must pass sieves of 250 mesh. Matter insoluble in hydrochloric acid never exceeds 25 parts in 100,000, the solution being bright and colorless.

Chemical purity and physical *uniformity! For* many years, from the beginning of dentifrice manufacture, chemists have turned to Sturge's Standard Precipitated Chalk for security in those two essential qualities.

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Daniel S. Dinsmoor, assistant vice-presidents; Samuel W. Allender, assistant to president; W. W. Schneider, secretary; J. R. Mares and Charles E. Caspari, Jr., assistant secretaries; Daniel M. Sheehan, comptroller; E. J. Cunningham, J. W. Ludwig, and William I. Warren, assistant comptrollers; Fred A. Ulmer, treasurer; Stephen Louis and J. F. Martin, assistant treasurers.

Trade Literature

New Bush Price List

W. J. Bush & Co., New York, has issued a new price list for 1938. The booklet is conveniently arranged and completely indexed . Copies may be obtained from W. J. Bush upon request.

Powell Insecticide Booklet

Believing that there is a great deal to be done in educating people to the necessity for good insecticides, John Powell & Co., Inc., New York, is distributing a booklet which covers the subject thoroughly. A page devoted to each of the common household pests gives an approved method for combatting them. Copies are available upon request.

Robertet Price List

P. Robertet & Cie, Grasse, has issued a new price list with sections devoted to Flower Essences, Resinoines, Orris Products, Mousse de Chene, Fixatives Robertet and Essential Oils. Copies of the list can be obtained from Charles Fischbeck Co., Inc., American agents for P. Robertet & Cie.

Tea-Tree Oil Booklet

The Colman-Sewell Corp., Cleveland, has compiled a booklet on Australian Tea-Tree Oil. The pamphlet is a synopsis of the discovery, development and uses of this new antiseptic oil. Copies can be obtained by writing to Colman-Sewell.

Legal

Pinaud Defends Trade Marks

Imitators of Pinaud's well-known "Eau de Quinine" and "Lilac Vegetal" were checked again on March 18 when, in the New York County Supreme Court, an action brought by the New York House of Pinaud, Inc., charging unfair competition and trade-mark infringement in the sale of imitation "Eau de Quinine" hair tonic and "Lilac Vegetal" toilet water was terminated by agreement signed by the defendants, William H. Loveland and William H. Loveland Co., of Binghamton, N. Y., promising to desist from attempting to imitate these Pinaud products.

Under the agreement the defendants agreed to discontinue the use of the words "Eau de" in connection with the word "Quinine" on any toilet preparations manufactured or sold by them, and likewise agreed to discontinue the use of the word "Vegetal" on the labels of any toilet preparations manufactured or sold by them.

Virginia Drug Bill

A drug and cosmetic bill, which follows more or less the federal S-5, has been passed by the lower house of the Virginia legislature.

Revlon Protects Prices

A restraining order against the Charmley Drug Shop, Inc., Newark, preventing it from selling the products of Revlon Nail Enamel Corp., New York, at prices lower than those named in a contract has been issued by Vice-Chancellor Bigelow. Vice-Chancellor Bigelow's opinion held that one fair trade contract issued by a producer to a retailer is sufficient to bind all other retailers to the prices named in the contract. He also held that although a manufacturer may refuse to sell to certain retailers, he may still secure an injunction against them when they are found to be selling at prices below those stated in fair trade contracts.

North Dakota Refuses Exemption

In response to the request of the Toilet Goods Association that small cosmetic packages be ruled exempt from the quantity marking provisions of the North Dakota Cosmetic Act, C. S. Ladd, Food Commissioner of the North Dakota Regulatory Department has stated: "In view of the fact that the large majority of packages of cosmetics would be exempt if the exemption was increased to 2 avoirdupois or fluid ounces, we are very definitely of the opinion that the sizes of exempt 'small' packages should not be greater than designated in the regulation which has now been adopted."

Camp on Cosmetic Tax

Frank B. Camp discussed the fight to have the federal excise tax on cosmetics repealed before the March 15 meeting of the Chicago Perfumery, Soap and Extract Association. Mr. Camp, executive secretary of the association, represented the cosmetic industry at a hearing before the Senate Ways and Means Committee in Washington on March 17. As a substitute for the revenue which the government now receives from the tax on cosmetics, he suggested a 25 per cent. tax on all alien remittances instead of the one per cent. now collected by the postal service. Mr. Camp disclosed that aliens remitted 632 million dollars earned in this country to European countries during the last year.

The Cosmetic Tax

An attempt made by the women members of the House of Representatives, under the leadership of Representative Mary T. Norton of New Jersey, to have the 10 per cent. excise tax on cosmetics eliminated from the revenue bill was unsuccessful. It was argued that the repeal of the tax on dentifrices and toilet soap was a "man's amendment" and unfair to women.

Mennen Protects Prices

The Mennen Co., Newark, N. J., has obtained a permanent injunction in the United States District Court for the Eastern District of New York, restraining Harrico Drugs, Inc., Brooklyn, N. Y., from selling Mennen products at prices below the company's stipulated retail prices.

Associations

A. D. M. A. Meeting Plans

The annual meeting of the American Drug Manufacturers' Association to be held at White Sulphur Springs, W. Va., May 2 to 5, promises to be an extremely interesting meeting. As usual the sessions of the Scientific, Biologic, and Pharmaceutical Sections of the Association will take place on the first day, and the general sessions will open on the second day.

The reports to be given at the session of the Scientific Section include: Alkaloid and Drug Standards, F. O. Taylor, Chairman; Analytical Assay Methods, R. J. Fosbinder, Chairman; Chemical Tests and Standards, L. A. Watt, Chairman; Crude and Milled Drugs, W. J. Stoneback, Chairman; Digestive Ferments and Glandular Products, Frederic Fenger, Chairman; Drug Extracts, F. E. Bibbins, Chairman; Pharmacological Assays, Paul S. Pittenger, Chairman; Synthetic Organic Chemicals, E. H. Volwiler, Chairman; Vitamin Assays, Arthur D. Holmes, Chairman.

F. F. Berg, Chairman of the Scientific Section states that R. J. Fosbinder, Chairman of the Subcommittee on Analytical Assay Methods has cooperative work under way on an assay of methylene blue by a method which promises to be more accurate than the present U.S.P. method. Also assays of ephedrine salts are being studied, an interesting report is anticipated on this subject.

Mr. Berg states further that the Subcommittee on Chemical Tests and Standards, under the chairmanship of L. A. Watt, is giving further consideration to the work developed last year on the assays of ammonium benzoate and ammonium salicylate. In addition, new problems are being studied which include assays for acetone, caffeine, sodium benzoate, and

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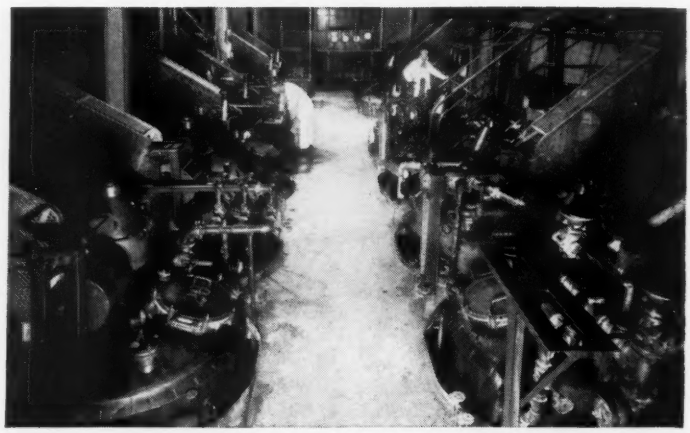
The standards Dow adheres to in the manufacture of Acetyl Salicylic Acid exceed by wide margins the rigid requirements of the U. S. Pharmacopoeia. Completely odorless, Dow Acetyl Salicylic Acid contains considerably less than the mere fraction of free salicylic acid content permissible under these requirements.

Starch granulations of Acetyl Salicylic Acid, so widely used today, are an original Dow development. The product is furnished in this form for the convenience of manufacturers making tablets by the dry-compression method.

Dow Acetyl Salicylic Acid, U.S.P., is available in the form of Crystals, Powder, Granulations 10% Starch (White, Pink, Green); also 16% and 20% Starch (White).



1 The Reaction between Acetic Anhydride and Salicylic Acid, the initial step in making Acetyl Salicylic Acid, takes place in this battery of glass-lined steel reactors.

2 Large Tablets under high compression are formed from the processed crystals to which the correct proportion of starch has been added. But before this, the Acetyl Salicylic Acid has been purified by crystallizing, filtering and re-crystallizing.

3 Granulations are obtained by grinding up the large compressed tablets. The illustration shows the free-flowing qualities of the granulations, ready for re-tableting.

4 Barrels Upon Barrels of Dow Acetyl Salicylic Acid awaiting shipment. Each barrel, paper-lined and carefully sealed, has been sampled, analyzed and approved.

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bismuth salts. The composition of bismuth salts is also being studied.

Subcommittee on Synthetic Organic Chemicals, E. H. Volwiler, Chairman is investigating the assay of theophylline ethylene diamine. It is planned to obtain cooperative work on a method which will produce results closer to the true value than the U.S.P. method. The melting point of scopolamine hydrobromide and the manner of drying as an important influence on the melting point, is also a suggested problem.

Dr. L. R. Thompson, Assistant Surgeon General, and Dr. W. T. Harrison, of

DR. JOHN F. ANDERSON

the National Institute of Health, U. S. Public Health Service, will attend the meeting of the Biological Section. Three important reports to be given at this section meeting are: Preservatives in Biological Products and Methods for Sterility and Safety Testing; Standardization of Antidysenteric Serum; Antityphoid Serum. In addition Dr. L. T. Clark will give a final important report on Dating of Exported Products. Also the Committee on Rabies Vaccine, now concerned with both human and canine prophylaxis, will present a report which should offer opportunity for interesting discussion.

The general sessions opening on the second day will include the reports of the President John F. Anderson; Executive Vice-president and Secretary Carson P. Frailey, General Counsel Horace W. Bigelow, and the various committees.

The final session will be given over to the Committee on Sales and Advertising Problems, under the chairmanship of E. V. Fraenkel. At this session a special address is to be given by Carl B. Fritsche who was one of the joint founders of the National Farm Chemurgic Council, and who has served as managing director of the Council for the past three years. The title of Mr. Fritsche's talk is "Science Points the Way to Progress."

The entertainment features of the meeting are being directed by a committee under the chairmanship of Victor E. Williams, of Monsanto Chemical Co. Mr. Williams has announced the following subcommittees: Transportation, Robert B. Magnus, of Magnus, Mabee & Reynard; Golf, Herman J. Dietel, of Merck & Co.; J. P. Remensnyder, of Heyden Chemical Corp.; James C. Chilcott, of Maltine Co.; Tennis, S. Barksdale Penick Jr., of S. B. Penick & Co.; Gerald S. Furman, of Merck & Co.; Ladies Entertainment, A. A. Wasserscheid, of Mallinckrodt Chemical Works; George Simon, of Heden Chemical Corp.; James T. Pardee, of The Dow Chemical Co.; Banquet, M. N. DeNoylles, of Chas. Pfizer & Co.; J. F. McDonough, of New York Quinine & Chemical Works; Evening Entertainment, William D. Barry, of Mallinckrodt Chemical Works; J. P. Remensnyder, of Heyden Chemical Works; Publicity, Gerald S. Furman, of Merck & Co.

The golf tournament will be played on the exacting but inspiring White Course, with its many natural hazards so easily forgotten because of the marvellous native scenery. The committee suggests that those attending the convention avail themselves of both the White Course and the equally fascinating Old Greenbrier Course for tuning up.

Fair Trade Dinner

The American Fair Trade League observed its twenty-fifth anniversary by holding a dinner at the Hotel Astor, New York, April 4. The guests of honor were United States Senators Robert J. Buckley, Arthur Capper, and John E. Miller.

Senator Buckley spoke on "Fair Trade and Re-employment," Senator Capper spoke on "Fair Trade and the Consumer," and Senator Miller spoke on "The Philosophy of the Fair Trade Movement. Charles C. Arbuthnot, professor of economics at Western Reserve University and a speaker at the league's first dinner, spoke on "Economics of Fair Trade."

Members of the dinner committee were: Dr. John F. Anderson, president of the American Drug Manufacturers' Association; Herman L. Brooks, president of the Toilet Goods' Association; J. Mahlon Buck, president of the National Wholesale Drug Association; Stanley C. Dunning, president of the New York Paint, Varnish and Lacquer Association; L. S. Hitchner, president of the Agricultural Insecticide and Fungicide Association; Dr. J. Leon Lascoff, president of the American Pharmaceutical Association; Edward C. Plaut, president of Lehn & Fink Co., Gordon D. Polesie, president of the Paint Dealers' Protective Association; George A. Raab, president of the Federal Wholesale Drug Association; Carroll Dunham Smith, president of the American Pharmaceutical Manufacturers' Association and Thomas Smith, president of the National Association of Retail Druggists.

A meeting will be held in the afternoon preceding the dinner at which John W. Dargavel, secretary of the National Association of Retail, F. J. Griffith, secretary of the National Association of Chain Drug Stores and R. D. Keim, vice-president of E. R. Squibb & Sons, will take part in the discussion.

Bims Arrange Golf Dates

At the meeting of the General Committee of the BIMS organization held at the Yale Club March 9, it was decided to hold five golf outings. The dates are as follows: week of May 9, week of June 20, week of July 18, week of August 22. Notices of definite day will be sent to each member in advance. Final—Thursday, September 22.

Charles W. Darr of Harriet Hubbard Ayer, Inc., Harry Griffiths of Pennsylvania Drug Co., and B. H. Badanes of McKesson & Robbins, Inc., are the committee to purchase prizes.

Albert C. Burgund of Carr Lowrey Glass Co., was appointed Chairman of the Handicap and Arrangement Committee, C. R. Keeley, of Toilet Requisites, was made Chairman of the Publicity Committee, and Historian.

Drug Section Activity

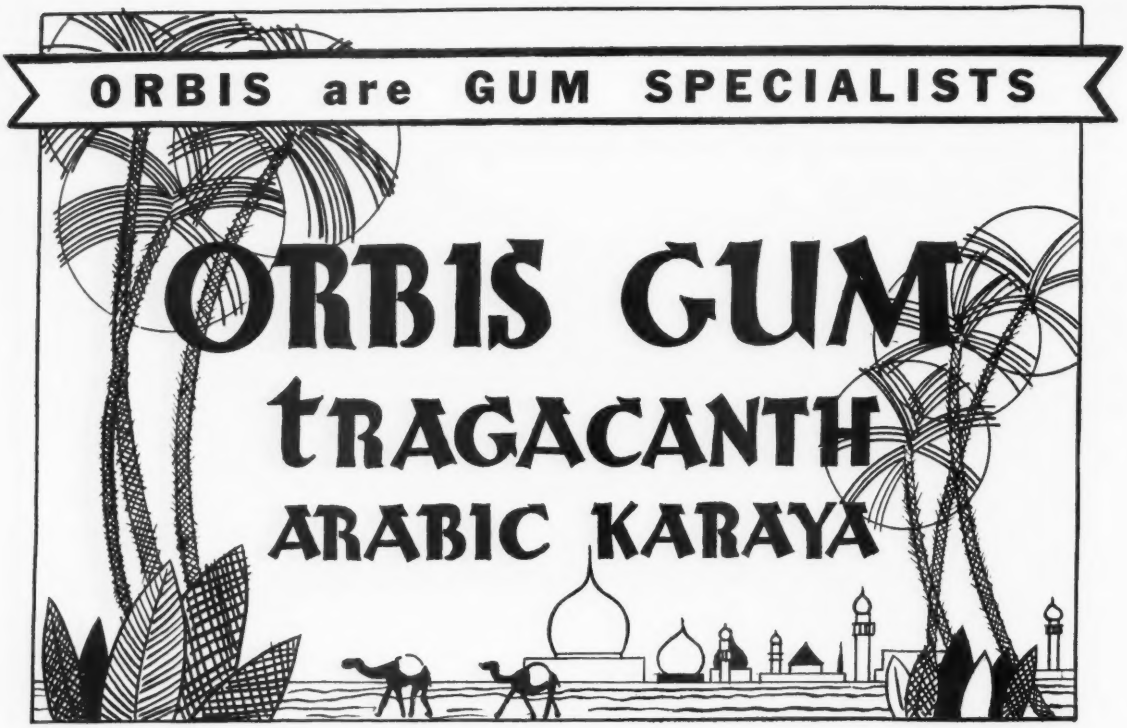
The Drug Chemical and Allied Trades Section of the New York Board of Trade is making plans for a "centralized information bureau," whose purpose will be to counteract unfavorable publicity directed against this industry. The industry will be divided into five sections—heavy chemicals, insecticides, laxatives, vitamins and dentifrices—and some one prominent in the field will be chosen to head each section.

Perfumery & Cosmetic Exhibits, Inc.

Perfumery & Cosmetics Exhibits, Inc., has been formed to handle all questions relating to the exhibit of perfumes and cosmetics at the World's Fair. It will have complete charge of the leasing of space and the operation of the special building devoted to the products of this industry.

Officers of the corporation are Herman L. Brooks, president; H. Gregory Thomas, vice-president and managing director; Paul H. Douglas, vice-president; Cecil Smith, vice-president; C. S. Welch, treasurer; Paul F. Vallee, secretary. Other directors include M. Michelin. Hugo Mock is counsellor.

Those interested in securing space in the building should communicate with H. Gregory Thomas, who has been appointed managing director and director of exhibits, at the office of the new corporation at 30 Rockefeller Plaza, New York. Space is available in units of 120 sq. ft. minimum at 600 sq. ft., maximum, at a rental cost of $20 per sq. ft. Among those who have already indicated that they will exhibit are Bourjois, Chanel, Corday, Coty, D'Orsay, Marie Earle, Barbara Gould, Lanvin, Ogilvie Sisters, Pinaud, Charles of Ritz, Roger & Gallet, Al Rosenfeld, Helena Rubinstein, Schiaparelli, Vadsco, Yardley.



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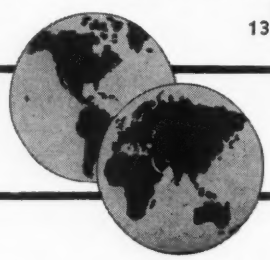

T. G. A. Convention Committee

The following committee will be in charge of the Toilet Goods Association convention to be held at the Biltmore Hotel in New York, May 24-26; C. E. Kelly of Hagerty Bros. & Co., chairman; A. C. Burgund of Carr Lowrey Glass Co.; W. D. Barry of Mallinckrodt Chemical Works; Charles Fischbeck of Charles Fischbeck Co.; W. E. Klaas of Brass Goods' Manufacturing Co.; M. Lemmermeyer of Aromatic Products, Inc.; W. P. Murray of Continental Can Co.; L. R. Root of Scovill Manufacturing Co. and Karl Voss of Karl Voss Corp.

Holland Heads Chi. Assn.

Chicago Drug and Chemical Association held its annual meeting March 31 at which the following officers were elected for the ensuing year: president, Robert L. Holland of Harry Holland & Sons, Inc.; vice-president, Elmer F. Smith of American

R. L. HOLLAND

Aniline Products Co., Inc.; secretary, Walter R. Nay of Mallinckrodt Chemical Works; treasurer, M. F. Charley of Standard Pharmacal Co. Directors elected to serve for two years are: William H. Schutte of William H. Schutte Co., Inc., George Epstein of Abbott Laboratories, C. Christensen of Chas. Pfizer & Co., Inc., and C. F. Henry of Armstrong Cork & Insulation Co.

Financial

Allied Products Earns $295,554

Allied Products Corp. reports for 1937 net profit of $295,554, equal after dividends on 64,200 shares of $1.75 Class A convertible common stock, to $2.44 each on 75,050 shares of common stock, against $313,901, or $2.68 a common share in 1936.

American Home Earnings Steady

American Home Products Corp. and Subsidiaries report for 1937 net income of $2,875,399, equivalent to $3.88 a share on 741,060 shares of $1-par common stock, and comparing with $2,825,261, or $3.81 a share in 1936.

Anchor Hocking Earnings

Anchor Hocking Glass Corp. (formerly Anchor Cap Corp.) and subsidiaries report for 1937 net profit of $438,239. Net profit of Hocking Glass Co. and subsidiaries was $713,542. Anchor Cap acquired the assets and certain liabilities of Hocking Glass on December 31, 1937.

Bourjois Earnings Up 25%

Bourjois Inc., and wholly owned subsidiaries report for 1937 net profit of $562,848, equivalent after dividends on preferred stock to $1.12 each on 392,225 common shares excluding 7,775 treasury shares. This compares with a net profit of $445,125, or 82 cents a share in 1936.

Cheesbrough Earns Less

Cheesbrough Manufacturing Co. reports for 1937 consolidated net profit of $807,335 for 1937 consolidated net profit of $807,335, equal to $6.73 each on 120,000 shares of $25-par stock, against $894,919, or $7.46 a share in 1936.

Dow Chemical Dividends

Dow Chemical Co., Midland, Mich., has declared dividends payable May 16 to stockholders of record May 2 as follows: on preferred stock or deposit receipts therefore 1¼ per cent., on common stock without par value 75 cents per share.

Emerson Drug Earnings Steady

Emerson Drug Co. and subsidiaries report for 1937 net profit of $1,433,467, equal to $1.86 each on 668,368 combined common shares, compared with net profit of $1,413,545, or $1.82 each on combined common shares for 1936.

General Plastics Earns More

General Plastics, Inc., reports for 1937 net income of $338,507 as compared to net income of $348,692 in 1936 and $240,743 in 1935.

Heyden Earnings Up

Heyden Chemical Corp. and subsidiaries report for 1937 net profit of $612,324, equal after 7 per cent. preferred dividends to $3.94 each on 149,639 shares of $10-par common stock. This compares with a net profit of $555,540, or $3.56 a common share in 1936.

I. V. C. Earns $92,780

International Vitamin Corp. reports for the six months ended Dec. 31, net profit of $92,780, equal to 45 cents each on 204,000 capital shares, against $83,429, or 41 cents each on 203,000 shares in the last six months of 1936. The net profit for the December quarter was $46,354, or 23 cents a share, as compared to $47,273, or 23 cents a share in the September quarter and $47,273, or 23 cents a share, in the December quarter of 1936.

Lehn & Fink Earns Less

Lehn & Fink Products Corp. reports for 1937 net profit of $532,623, equal to $1.33 each on 400,000 shares of $5-par capital stock. This compares with a net profit of $685,086 or $1.71 a share in 1936.

McK & R. Earns More

McKesson & Robbins, Inc., reports consolidated net earnings for 1937 of $3,667,324, equivalent to $1.60 each on 1,282,983 shares of common stock outstanding, after deducting preference stock dividends paid during the year amounting to $1,608,672. This compares with net income of $3,286,614, equal to $1.32 a share in the preceding year.

Consolidated net sales during the year, excluding intercompany sales, amounted to $174,572,229, an increase of 14.01 per cent over sales of $153,119,474 reported for 1936. Of this amount, wholesale drug sales totaled $106,333,977; wine and liquor $44,714,907; manufacturing, import and export sales, $28,417,575, less elimination of $4,894,231 for intercompany ales.

The following properties were acquired by McKesson & Robbins during 1937: Blumauer-Frank Drug Co., Portland, Ore.; Milwaukee Drug Co. and W. A. Hover & Co., Denver, all wholesale druggists; Globe Distributors, Inc., Atlantic City, and Libbey & R. C. William Corp., Hartford, Conn., liquor dealers, and Gilman Wholesale Liquor Co., Washington, D. C.

Miller Wholesale Earnings

Miller Wholesale Drug Co. and subsidiaries report for 1937 a net profit of $14,129, equal to 33 cents each on 42,410 capital shares as compared with $7,343 or 17 cents a share in 1936.

Merck Earns $1,095,248

Merck & Co., Inc., and subsidiaries report for 1937 net income of $1,095,248, equal after preferred dividends to $2.72 a share on common stock as compared with $1,048,222 earned in 1936. The gross profit for the year was $4,878,871, as compared with $4,293,512 in 1936.

Norwich Earns Less

Norwich Pharmacal Co. and subsidiary report net profit, after Canadian income taxes, of $807,151, equal to $2.02 each on 400,000 shares of $5-par common stock and comparing with $922,905, or $2.31 a share, in 1936.

The refiners of "Flag-Brand" Oils operate several locomotives and about 200 tank cars, in which their various petroleum products are shipped to most countries on the European Continent.

THE manufacture of White Mineral Oils U.S.P. is a highly complicated process which requires considerable skill of experienced petroleum chemists.

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Noxzema Earnings—Correction

In our March issue in reporting that Noxzema Chemical Co., Baltimore, earned 57 cents a share on 400,000 shares in 1937, the figure, $1,243,700, was given as the company's earnings for the year. This was a mistake. The company's total sales for 1937 amounted to $1,243,700.

Owens-Illinois Earns Less

Owens-Illinois Glass Co. and subsidiaries report for the year 1937 net earnings of $9,351,627, equivalent to $3.51 per share on the 2,661,204 shares of $12.50-par stock. This compares with a net profit of $10,099,131 for 1936, equivalent to $7.59 per share on the 1,330,602 shares of $25-par stock outstanding December 31, 1936.

People's Drug Earns Less

Peoples Drug Stores, Inc., and subsidiaries report for 1937 net profit of $1,059,602, equal after 6½ per cent. cumulative preferred dividends to $4.07 a share on 245,675 shares of no-par common stock. This compares with $1,328,675 or $5.04 a share on 245,224 common shares in 1936.

Sales totaled $22,383,144 as compared with $21,121,116 in 1936.

Plough Earnings Off Slightly

Plough, Inc. and subsidiaries report for the year 1937 a net profit of $304,033, equivalent to $1.01 a share on 300,000 shares, and comparing with a net profit of $358,650, or $1.19 a share, in 1936.

Rubinstein Earnings Up

Helena Rubinstein, Inc. and subsidiaries report for 1937 net profit of $263,947, equal after dividends on Class A stock to $1.04 each on 157,658 shares of no-par common stock. This compares with a net profit of $169,186 or $1.69 a share on 100,000 shares of preferred stock in 1936.

Squibb Earns More

E. R. Squibb & Sons reports for 1937 net profit of $1,312,822, compared with a net profit of $1,219,765 in 1936.

U. S. I. Earnings Steady

United States Industrial Alcohol Co. reports for 1937 before recording decline in value of marketable securities, net profit of $484,812, equal to $1.24 a share on 391,238 shares of capital stock. After writing down the company's marketable securities to market quotation values as of Dec. 31, 1937, an unrealized loss of $456,257 was shown on the books for the year. For 1936 the company showed a loss of $77,581. Balance sheet as of Dec. 31, 1937, shows cash of $1,031,592, current assets of $12,892,026 and current liabilities of $2,852,702. Inventories amounted to $7,663,375.

Vick Earns Less

Vick Chemical Co. and Subsidiaries report for the last quarter of 1937 net profit of $861,116, approximately $1.26 a share. In the preceding quarter net earnings were $1,007,785, or $1.44 a share. In the December quarter of 1936 the company's earnings were $1,126,623, or $1.60 each on 700,280 shares.

Obituaries

William T. Arnold

William T. Arnold, for the past twenty-two years employed by McKesson & Robbins, Inc., New York, died March 19 after an illness of two weeks. He was thirty-six years old.

Mr. Arnold was born in Brooklyn and entered the employ of McKesson & Robbins in 1916. At the time of his death he was assistant to Charles Hermann, vice-president of the Cliff street branch of the company. He is survived by his wife and a four-year old son.

Ralph P. Brennan

Ralph P. Brennan, associated with the New York Quinine and Chemical Works, Inc., died March 28.

Frank A. Davis

Frank A. Davis, branch manager of Abbott Laboratories in Dallas, died in that city at the age of forty-one.

Frederick T. Fay

Frederick T. Fay, vice-president of Carlton & Hover Co. died in a hospital at Lowell, Mass., March 6 at the age of eighty-nine years. He was born in Manchester, N. H., and became an apprentice in the Carlton & Hovey Co. soon after moving to Lowell in 1857.

Eugene Gillespie

Eugene Gillespie, southeastern representative of Magnus, Mabee & Reynard, Inc., died March 20 at his home in Atlanta. He was fifty-one years old.

Mr. Gillespie had been associated with Magnus, Mabee & Reynard, Inc., for the past eleven years. Previous to that he was in the employ of John B. Daniel, Inc., and the Lamar-Rankin Co., both of Atlanta.

Jacob Gundlich

Jacob Gundlich, for fifty years the active head of the accounting department of George L. Lueders, New York, died March 22 at the age of seventy-nine.

Mr. Gundlich was born in Germany and came to America as a young man. He entered the employ of George L. Lueders two years after the company was formed and celebrated his fiftieth year with it on September 14, 1937.

Ernest George Jackson

Ernest George Jackson, president of National Drug & Chemical Co. of Canada, Ltd., Montreal, died March 6 at Sea Island Beach, Ga., where he was vacationing.

He was born in India where his father was an official in the Indian Civil Service. He was educated in Scotland and came to Canada as a young man. He was elected president of the National Drug & Chemical Co. of Canada, Ltd., in 1936.

M. J. Milmoe

M. J. Milmoe, vice-president of F. B. Redington Co., Chicago, died March 22 at the age of sixty-seven. He has been associated with F. B. Redington Co. since 1904.

He had been in poor health for the past four years and turned over his duties as chief engineer of the company to his successor about two years before his death.

Merrell P. Northington

Merrell P. Northington, a vice-president and director of McKesson & Robbins, Inc., died at his home in Birmingham, Ala., following a long illness. He was sixty-two years old and had been in the wholesale drug business in Birmingham for about twenty years.

William D. Ticknor

William Davis Ticknor, president and chairman of the board of Commercial Solvents Corp., New York, died at his home in Englewood, N. J., March 24 of a heart ailment. He was fifty-seven years old.

Mr. Ticknor was born in Boston and moved to New York twenty-five years ago to become a partner in the banking firm of Goodrich-Lockhart Co. He became president of Commercial Solvents Corp. in 1928

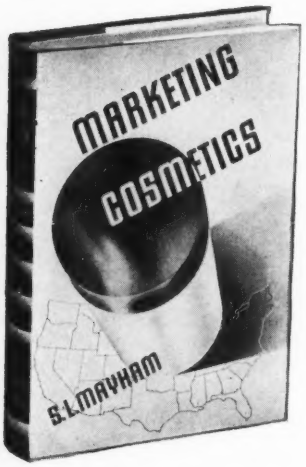
He was a director of Corn Products Refining Co., the B. F. Goodrich Co., and American Machine and Metals, Inc.

Kurt Walwer

Kurt Walwer, vice-president and director of Pfaltz & Bauer, Inc., died suddenly at his office in the Empire State Building, Wednesday, March 9. He was forty-six years old.

Mr. Walwer was a graduate of New York University and had been with Pfaltz & Bauer for many years. In 1922 he became secretary of the company and in 1927 vice-president and director. He was also a vice-president and director of the Calny Realty Co., and vice-president and director of the Coast Realty Corp.

He is survived by his wife, two sons and his mother.



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Foreword by H. GREGORY THOMAS
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9. The Drug Store
10. Chains and Syndicate Stores
11. The Beauty Shop
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INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

Marketing Cosmetics, by S. I. Mayham, 229 pp. cloth, McGraw-Hill, New York, $2.50.

Inquiries to our Book Department have indicated a decided lack of literature on the subject of marketing cosmetics from the standpoint of the manufacturer. Mr. Mayham's book fills this gap as it is a guide for the manufacturer in placing his products before the stores and the public. The book deals with all the various factors which enter sales promotion, namely outlets, advertising, prices, legislation, etc., reviewing the strong and weak points of established practice and suggesting improvements. Mr. Mayham is well qualified to write on this subject because of his long and intimate association with the industry. Chapters on Price Maintenance, Prices and Discounts and Relations with the Government are particularly worthy of comment and should be read and studied by every manufacturer.

The Hair And Scalp, by Agnes Savill, Second Edition, 309 pp., W. Wood & Co., Baltimore, $4.75.

The first edition of The Hair and Scalp met with such widespread popularity that the author found it necessary to issue a second edition within two years.

The revised edition contains twenty more pages. Additional data and further investigations of the author necessitated the altering of most of the text, especially in the paragraphs dealing with clinical investigations and treatment.

The subject is dealt with from the standpoint of the simple disorders rather than the rare diseases. The chief symptom complained of by the patient is investigated and is followed by a list of its possible causes. The disease is fully described in the chapters which deal with its characteristic symptoms and the other possible causes are passed in review and briefly differentiated.

We particularly call this book to the attention of all readers interested in the cause and care of the disease of the hair and scalp.

The Biological Standardization Of The Vitamins, by Katharine H. Coward, D.Sc., 227 pp., W. Wood & Co., Baltimore. $4.50.

A new book for all who are concerned with the quantitative estimation of vitamins in foods, in preparations of the vitamins for therapeutic use and in preparations made during the chemical and physical investigations on the vitamins which have to be examined for biological activity. It will be found invaluable to research workers investigating the composition and synthesis of the vitamins, to manufacturing chemists who prepare concentrates of the vitamins for clinical purposes and to the manufacturers of the many food products claimed to be "rich in vitamins." It will also be of considerable interest to analysts, to pharmacists and to many members of the medical profession.

Pharmaceutical Mathematics, by Edward Spease, Ph.C., B.S., Ph.M., Second Edition, 150 pp., McGraw-Hill Book Co., Inc., New York, $1.75.

This textbook, now in its second edition, follows the general plan of the first edition. However, additional problems have been added, the chapters on manufacturing in quantity and percentage solutions have been rewritten and the chapter on profit and loss has been improved by a contribution made by Dr. L. H. Baldinger of the University of Notre Dame. The author particularly strives to impress the reader with the necessity of thinking, rather than memorizing a few specific problems in mathematics.

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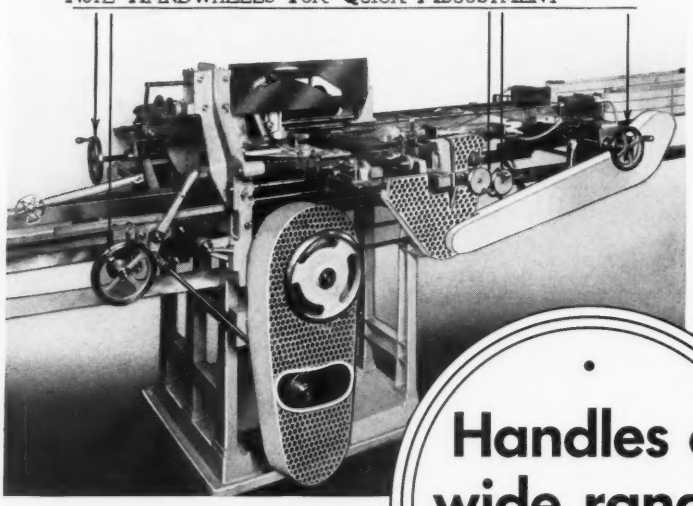
WRAPPING MACHINE

NOTE HANDWHEELS FOR QUICK ADJUSTMENT



Handles a wide range of sizes

WITH THIS new wrapping machine you can change from one size package to another in ten minutes flat — the change being made in all three dimensions of the package. All adjustments are made by handwheels conveniently located.

Handles a wide range of sizes. Has a speed of at least 40 to 70 packages per minute, depending on size and nature of package. Roll or sheet feed.

Can be equipped to handle glassine, transparent cellulose, waxed paper, foil, or plain paper wrappers.

ELECTRIC EYE may be provided for registration of printed materials fed from a roll.

Our FA type wrapping machines have met with wide favor, because of their comparatively low price, simplicity of operation, and extreme versatility. The new FA-Q models are a further step in advance.

The Package Machinery Company, realizing the demand for versatility, has pioneered in adjustable wrapping machinery. During our 25 years of experience, we have served hundreds of manufacturers in virtually every field of industry involving packaging. Our complete facilities and wide knowledge of packaging problems can be of value to you in securing the right package for your product. Consult us for lower costs and package improvement.

Both of these packages are wrapped on a single FA machine—illustrating its wide size range.

Write to our nearest office

PACKAGE MACHINERY COMPANY - - Springfield, Mass.

NEW YORK CHICAGO CLEVELAND LOS ANGELES

Mexico, D. F. Apartado 2303 — Melbourne, Australia: Baker Perkins, Pty., Ltd.

Peterborough, England: Baker Perkins, Ltd. — Buenos Aires, Argentina: David H. Orton, Maipu 231

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

PRODUCTION FORUM

BY Francis Shilson
PRODUCTION ENGINEER

THE OPERATION OF A FORMULA ROOM

Most of the large drug concerns have a formula room in which ingredients for various batches are weighed out and checked. These rooms are operated in two ways. In certain instances the original opened containers are left in stock and the weigher gets a scoop full of material from the original container and carries it to the weighing table. The second procedure is to bring the original container to the weighing table. It is obvious that the first procedure is least economical because it involves an extra trip to the point where the original container is located. Moreover, such a procedure is wasteful and dirty because the weighers are bound to spill some of the material on the floor. The second procedure is obviously the best. In order to utilize this procedure it is necessary that all barrels and heavy containers be placed on dollies. Then the container can be pushed to the weighing table with very little effort and all the dust may be confined to one centralized point. This, of course, means that small containers which would be stored on upper shelves must be carried to the weighing table. By using a table truck it is possible to pick up several of these small containers at one trip.

It is not practical in dealing with pharmaceutical formulas to make the weighing table portable, so that it can be pushed from place to place in the stock room to avoid moving the original container, because a variety of scales are needed to weigh out the average formula, due to the variability in the quantities called for. For instance, the formula may call for 150 lbs. of one item and ½ oz. of another. It is obvious that the scales required for the heavy weight would not be sensitive enough for the light one. A second difficulty lies in the fact that no advantage is gained by taking a weighing table to the original containers unless the weighing table is large enough to accumulate all the ingredients as the weigher goes along. However, if in certain instances a plant deals only with very small quantities, then it might be possible to have a scale company design a weighing table, incorporating a platform scale, an intermediate scale and a sensitive scale. Then it would be possible to move the weighing table to the original containers and to carry along the required quantities. It is by no means impossible to design such a unit and where it could be applied, there is no doubt that a lot of time would be saved. For average purposes however, the best procedure is to bring the original container to the scale. The design of the weighing table is important. A properly designed weighing table should provide all the necessary scales, it should incorporate a sink, a cabinet for scoops and a supply cabinet for miscellaneous paper bags, bottles, corks, etc. Although some firms follow the practice of sending part of a particular formula to the manufacturing department, the best and safest procedure is never to release a formula from the formula room until all ingredients have been accounted for and doubled checked.

The manner of transporting the weighed ingredients to the process department is optional. In some cases portable tables which can be used as work tables in the process department are very economical. In some cases it is better to use trucks.

There is one point in connection with the arrangement of open stock which should be mentioned, namely, the items which are used frequently should be located as near work table as possible without regard to numerical or alphabetical order. This arrangement saves a vast amount of time in the course of the year.

A very handy device in a formula room for storing small quantities of material that are frequently used

High Speed

up to 1500 tablets per minute

HIGH PRODUCTION WITHOUT MULTIPLE PUNCHES

RUGGED SEMI-STEEL CONSTRUCTION

AUTOMATIC EXCESS PRESSURE RELEASE

NEW CAM ARRANGEMENT MINIMIZES CAPPING

STOKES BB-2 ROTARY TABLET MACHINE

If you want to produce pharmaceutical tablets, up to ½-inch in diameter, in large quantities, install a Stokes BB-2 machine. From 1,000 to 1,500 tablets per minute can be accurately produced without the use of multiple punches. Two individually measured and compressed tablets are separately formed by each pair of punches and dies with each revolution of the head . . . and there are twenty-seven pairs of punches and dies.

Like other Stokes Rotary Machines, this is a rugged, semi-steel machine, with strength to withstand the strains of continuous operation in hard service. It is equipped with the Stokes Automatic Excess Pressure Release . . . the mechanism that cushions compression and absorbs all shock and undue strain. Adjustments for weight and hardness may be made while the machine is running. It is a clean machine, with thoroughly guarded working parts and drive. Variable speed drive can be had if desired. Belt or motor drive is optional.

If you want increased production at lowest cost . . . install this machine.

If you want to "double compress" there is a special model of this machine you should investigate.

If the tablets you make are 7/16" diameter or less, we can further increase production by supplying a model with 33 pairs of punches and dies.

If "capping" has caused trouble, this machine helps materially to remedy that difficulty.

We should like to tell you more about this BB-2 machine . . . show you what it does, what it saves. Write us.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road Olney P.O. Philadelphia, Pa.
Representatives in New York, Chicago, Cincinnati, St. Louis
Pacific Coast Representative • L. H. Butcher Company, Inc.

F.J.Stokes

PHARMACEUTICAL EQUIPMENT

FJS Est. 1895

consists of a carousel. This is simply a square or circular series of shelves divided up into small bins and mounted on a stand which will permit them to be turned. A carousel will hold a great many small items and is useful in saving steps.

The question of whether barrel dollies or barrel trucks should be used should be considered carefully before a decision is reached in favor of either. It is possible to obtain a self adjusting two-wheeled barrel truck which is a good deal cheaper to use than dollies provided the open barrels are stored out in the open at floor level where they are accessible. If the barrels are stored under shelves a barrel truck is awkward to handle.

As to the manner of storing barrels two possibilities are worth investigation. When a great number of barrels of the same item are handled, drum and barrel racks are very useful. On these racks the barrels and drums are usually stored on their side and they can be rolled in at one end and taken out at the opposite end. If however, a variety of barrels and drums are on hand, it is much the best policy to store them upright. Barrel racks can be made of steel which of course, is somewhat expensive but satisfactory racks can be made of wood with steel runners on which to rest the barrels. These runners make it possible to pull even very heavy barrels in and out of the shelves without undue effort and they keep the wood from splintering.

GRANULATING MIXER

At the Norwich Pharmacal Co. we used small combination blenders and sifting units for loading mixer and filling machine hoppers. These units consist of small mixing troughs having horizontally mounted sifting chambers at one end. The drive shaft runs through the trough and the sifting chamber, and the mixing spiral and the brush spider are both mounted on it. Material is discharged through the head of the mixer into the sifter chamber. Equipment of this sort is standard in the bakery industry. Portably mounted units which can be raised or lowered are available in standard sizes and are extremely useful for feeding dry materials into mixing vessels such as tooth paste mixers. One nice thing about these units is that the speed of discharge can be controlled simply by controlling the amount of powder that is admitted into the sifting chamber. Thus in making tooth paste dry materials can be fed into the excipient only as fast as it is absorbed. In feeding light fluffy powder, like magnesium oxide into liquids, the advantage of controlled uniform feeding is obvious. The reason we mentioned this unit is that we are working with Jack Eads of Read Machinery Corp. of York, Pa. on the development of a combination mixer and granulator for tablet granulations. This machine will obviate the transfer of wetted tablet mass to granulators. In operation the powders will be dampened in the usual way. Then the gate into the granulating chamber will be opened and the mass admitted at a uniform rate. The finished granulation will drop out of the granulating chamber on to drying trays. Thus it will be possible to make tablet granulations with one piece of equipment without transfers of any sort. If this equipment interests you I shall be very glad to hear from you.

FILTERS

Tested Appliance, 2843 W. 19th St., Chicago, Ill. makes a type of filter known as the Everpure Water Filter. It also makes a small industrial filter known as the Dick Filter. These filters are identical. When used in water service a charge of purifying materials is put into the filter. Aside from this there is no difference between the two. This filter interested us after examining one which had been in water service for more than a year. It produces a brilliant water free from all chlorine and other odors. Hence its usefulness for factory drinking water systems. The purifying charge is insoluble and requires replacement but once or twice a year. Large units for process water can be obtained. The filter medium used in both the Everpure and Dick filters is cloth. For plant filtration purposes the Dick filter is used like any other filter. It is very compact. A No. 7 unit contains nine square feet of filter area and is only sixteen and three quarter inches long by eight and a half inches in diameter.

VIBRATION INSULATOR

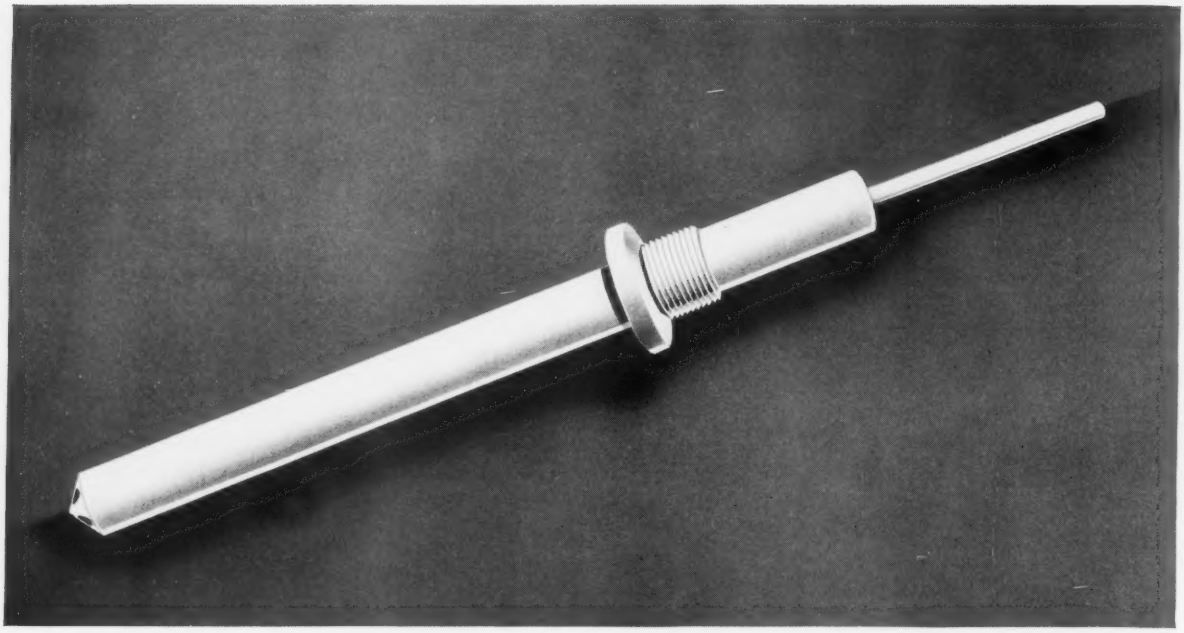
The B. F. Goodrich Co., Akron, O. has added a new type of rubber insulator to its line of industrial products. You are familiar with the type of insulator, which consists of rubber vulcanized to pieces of angle iron, a type which is suitable for heavy equipment. The new type 30 consists simply of a live rubber cone, into the opposite ends of which, standard cap screws are molded. These insulators are designed for absorbing vibration from small, noisy equipment such as air compressors, etc.

WATER HEATER

General Fittings Co., Providence, R. I. offers a variety of capacities in hot water heaters for process work ranging from three to thirty-five gallons per minute. It is claimed that when 180° water is used as the heating medium cold water can be raised from 40 to 140°. The use of steam as a heating medium increases the capacity of the unit in proportion to its pressure. These units consist simply of copper coils housed within a heating chamber. When hot water is required at widely scattered locations in a plant it generally is more economical to heat the water at the point of use instead of piping it for long distances from a common source.

BLINDS

Chicago Venetian Blind Co., 1208 S. Morgan, Chicago, manufactures a line of window blinds made of aluminum slats. Thus the slats are warp proof, impervious to wear and corrosion and very good looking. We used blinds like these in the bottling plant at the Norwich Pharmacal Co. Widths all the way from eighteen inches to ten feet can be obtained and wider ones can be made to order.



Working in the Precious Metals

Craftsmanship, for beauty alone, was the ideal of the workers in the precious metals of the 14th and 15th centuries. The works of art of Cellini and his contemporaries are guarded jealously today as priceless heritages from the past.

But what about the industrial craftsmanship of the 20th century in the precious metals for utility and safety?

Solid silver — one of the precious metals — was used in the manufacture of the Filling Stem illustrated above. The U. S. Filling Machine using these silver stems was manufactured to bottle a product where contamination by contact with the ordinary filling stem must not occur — and where high-speed filling was an absolute essential.

The problem of building a machine that had all the necessary requirements to meet the demands of this particular manufacturer was given to us for solution — and we solved it! Today another U. S. Custom-Built Filling Machine is doing an exceptionally fine job for a highly pleased client.

Plant efficiency in the bottling and packaging of your product is your goal and our business. Many of the greatest names in American Industry have listened to the philosophy of Custom-Built Machinery of engineered-design.

A few among them are —

Lambert Zonite Pepsodent Jergens
Parke-Davis Yardley Lucien Lelong
Upjohn Bauer and Black Clorox
Pinaud Lucky Tiger E. R. Squibb

To make the attainment of your goal of plant efficiency an established fact, U. S. Custom-Built Machinery of Engineered-Design including washers, fillers, closers, filters, conveyors and kindred equipment offer moderate first-cost — and lasting low-cost per unit processed.

WASHERS CLEANERS FILLERS FILTERS
LABEL-GUMMERS CONVEYORS CAPPERS PUMPS

U.S. BOTTLERS MACHINERY CO.
4009-4027 N. ROCKWELL ST. CHICAGO, ILLINOIS

POINT OF USE

Speaking of plant services such as hot water mentioned above, reminds us to point out that refrigeration is another service that is more economical when decentralized than it is when centralized because of the great cost of insulated pipe lines. When refrigeration is required at many scattered points throughout the building it is less expensive to use a number of small refrigeration units and much more flexible. Centralization is all right when all the usage points are located in a straight line from the plant so that a single header can act as a common service line, but when a number of branches must be taken off the main header or riser the cost of piping increases sharply and pipe line losses tend to increase.

DRUM TRUCK

Wash Co., Danville, Ill., offers a novel type of drum truck for handling steel drums weighing up to 700 pounds. Only drums having side chimes can be handled because the truck is equipped with pivoted lifting shoes which engage the lowest chime when the truck handle is pulled back to lift the drum.

VIBRATION INSULATORS

In addition to the Goodrich insulators mentioned elsewhere, a new type of vibration insulator has been developed by Coyne Vibration Control Inc., 244 W. 49th Street, New York. The Coyne units combine rubber, cork and steel springs within a scientifically designed metal housing. A great variety of sizes is available ranging in carrying capacity from fifty to twelve thousand pounds, per unit.

WET SCREEN

A good many products are laboriously filtered when all they need is screening. Screening is a great deal faster and the screen because of its limited size is a good deal easier to change and to clean. What a filter accomplishes with many square feet of filter area a screen equals with very few feet of screen surface by means of vibration. In the sugar industry raw juice is handled in this manner. In our own trade the filtration of quince, karaya, tragacanth and other mucilages could be handled in this manner. The W. S. Tyler Co., Cleveland, Ohio, have made wet screen for a good many years and will be glad to help you if you have any problem to which wet screening can be applied.

COTTONING

Eino E. Lakso, an expert in special machine development whose address is Box 257, Fitchburg, Mass., has been working for some time on a machine for inserting cotton into tablet bottles. He claims to have developed a method of inserting the cotton into the bottles and distributing it under the shoulders with a great saving in labor and some saving in cotton. We thought you'd be interested in this advance information. Such a machine will be a boon to the industry.

IT BEATS THE DUTCH

For years we've all used pebble mills in one application or another. Pebble mills as you know achieve their milling effect by means of the attrition and concussion of balls or pebbles tumbling within a revolving cylinder. Now the Dutch have come along with a machine called the Vibratom which does exactly the same thing a great deal faster in a very much smaller space and, it is said, a good deal better. The Vibratom oscillating mill consists of a small housing mounted on suspension springs and driven with an eccentric drive, which causes it to oscillate rapidly. When the machine is in motion the balls it contains start to move and vibrate. Material is fed through the top and passes continuously from the bottom. It is claimed that material can be reduced in a single pass from one half milimeter to one thousandth milimeter. In other words to an impalpable state. This looks like a good bet for face powder milling. The machine is very simply constructed and easy to clean.

GRINDING

In selecting grinding equipment it is essential to consider capacity, product uniformity and power consumption. Many hammer mills are power hogs. In one instance the comparison between an attrition mill and a hammer mill was as follows: the attrition mill—one hundred pounds per horse power per hour; the hammer mill ten pounds per horse power per hour. The same drug was used in both tests. Hammer mills will handle materials that attrition mills won't touch. But improvements on the pin disc type of attrition mill seem to offer interesting possibilities in combining low power consumption with high capacity. Milling rolls are good grinders and require comparatively little power, but they will handle only relatively small pieces at the start. Large pieces of bark and long, tough roots cannot be handled with this type of mill unless such materials are cut down to feeding size first. Generally it is undesirable to divide the grinding operation into two steps. It is better to take it in one if the equipment is designed to permit such a procedure. Large pieces must of course be hand fed, while small pieces like cascara bark or nux vomica buds can be fed automatically. Present day grinding equipment is a long way from even approximate perfection yet. But a few wrinkles on which we are working now may give the problem a new twist and if so we'll report later when the job is done.

LINK BELT

Have you seen any samples of the new flat top link belt? This new carrier belt developed by the Link Belt Co. can travel in two planes. It will travel around a sproket and then make a ninety degree turn in the horizontal plane. The upper surface of this chain is smoother than the usual type of link belt chains commonly employed on bottling equipment. The two plane feature indicates the usefulness of this new link belt in layouts where it is desirable to eliminate dead

THESE CONTAINERS MAY HOLD YOUR GOOD PRODUCT

They also contain some air. If this air is dry no harm will come to the product. If the air is humid, your product may be spoiled before it reaches the consumer. For this reason many manufacturers now use the LECTRODRYER, which maintains constant low relative humidities. In packing and storage rooms where the LECTRODRYER is used, only dry air and your product enter the container. With the LECTRODRYER you may be sure that your tablets, effervescent products, etc. will reach the purchaser unharmed by atmospheric moisture, even though the product was packed during the most humid summer weather.

The LECTRODRYER also enables many users to maintain production schedules, regardless of weather. If your product can be satisfactorily manufactured on dry winter days, the LECTRODRYER will enable you to carry on throughout the summer. The LECTRODRYER provides winter dryness on humid summer days.

The LECTRODRYER has found a multitude of uses in the chemical and pharmaceutical fields. A wide range of standard sizes is available for the efficient handling of requirements from a small cabinet to a large building.

Write for Bulletin AC describing and illustrating this equipment.

PITTSBURGH LECTRODRYER CORPORATION

FOOT OF 32nd STREET — PITTSBURGH, PENNA.

plates and to make sharp turns or to travel in irregular paths.

HUMIDIFIER

Those of you who have had a good deal of experience in operating labeling and wrapping machines are fully aware of the necessity for storing labels and wrapping materials under conditions that will keep the paper from drying out. The best way to accomplish this is to humidify the label storage room. Humidity control should be uniform and automatic. The Cugley Incubator Co. of Elk Park, Ind., have a compact humidifier which seems to us ideal for label room purposes. This humidifier consists of a small tank and an automatically controlled electric motor which pumps the water into the atmosphere at a minimum rate of four gallons of water per 24 hour day. The unit is operated by a sensitive humidistat with a working range between 10 and 85%. To install the device all that is necessary is to break into a water pipe and to connect up the electric cable with a power line. This unit was developed for hatcheries where humidity must be held right on the button. Therefore, it seemed to us that this handy device has numerous applications in our trade.

X-RAY

General Electric X-ray Corp., Chicago, Ill., has developed two visual inspection units for inspection purposes. One unit is used for inspecting packaged material, the other for bulk material. In the food trades X-ray units are used for detecting slack fill in sealed packages. The G. E. units are equipped with automatic ejectors to throw substandard packages out of line. If these units can be calibrated fine enough we can visualize a use for them in inspecting packaged liquids, which in spite of filtration sometimes pick up specks of dirt from the pipe lines or from improperly cleaned bottles.

SYNTHETIC RUBBER HOSE

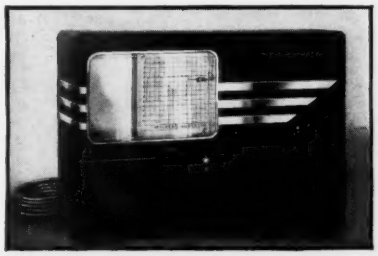
A bulletin from the Thiokol Corp., Yardville, New Jersey describes a type of flexible rubber hose, lined with Thiokol which might provide the answer for a hose that will handle oils, grease and similar materials that will attack ordinary rubber. It is claimed that this type of hose is used for Bendix Vacuum Powder Brakes. For this exacting service the hose must be filled with gasoline and oil for a period of 48 hours, after which it must not leak or collapse under 29 inches of vacuum. This is certainly a tough requirement indicating the possibility of using this hose in the liquid room provided it is not too expensive.

CAMERON INDUSTRIAL pH METER

The trend toward factory utility and simplification is evidenced in the design of the Cameron pH Meter, announced by Wilkens-Anderson Company of Chicago.

With the wide spread acceptance of the glass electrode as the tool for more accurate pH control, Dr. Cameron's problem was to design an instrument which could be depended upon for sustained accuracy, not possible with "field boxes" and portable, self-contained electrometers.

How well Dr. Cameron has accomplished this may be surmised from the directions enclosed with the instrument which state, "this instrument should be turned on at the start of the work and should not be turned off between tests. It is built for all-day, continuous use."



For convenience, too, the original beaker or bottle used for sampling is simply used, it not being necessary to pour off a small sample into a special sampling cup. This guarantees a true pH figure for the entire sample rather than the testing of only upper layer, so often true when tiny sample cups are necessary. The holder for the electrodes are mounted on an ordinary ring stand and all work is done on the table. This results in much freer movements and less chance of breakage when tests must be hurriedly made.

SEND FOR A COPY

Economy Engineering Co., 2635 Van Buren St., Chicago . . . A brochure on stackers and portable elevators.

U. S. Stoneware Co., Akron, O. . . . A bulletin on stoneware piping, "The Acid Test."

Patterson Foundry & Machine Co., East Liverpool, O. . . . A bulletin on mixers of all kinds and for all purposes.

The Revolvator Company, North Bergen, New Jersey, offers a new catalog describing their complete line of handling equipment. This company makes tearing machines, lift truck barrel, etc.

The Exact Weigh Scale Co., Columbus, Ohio, have sent in a catalog on a great variety of accurate weight scales which might be used in a formula room.

A bulletin has just been issued by the Chambon Press Corp. describing the various Chambon and Champlain printing presses. These presses are exceptionally economical for manufacturers who have very large runs of labels or similar printed matter.

NO *Lost* BATCHES

You never have to throw out batches contaminated by oil and grease when you use the new "LIGHTNIN" Grease-Free Sealed Ball Bearing Mixer. Only "LIGHTNIN" guarantees that no grease or oil from the outboard bearing will ever run down the shaft to spoil your mix. This exclusive "LIGHTNIN" feature is available on both geared and direct drive models at no extra cost. Remember, only "LIGHTNIN" Mixers have the famous double mixing action that gives you maximum mixing for your money. Write for literature.

EXCLUSIVE PATENTED OFF-CENTER PRINCIPLE

MIXING EQUIPMENT CO., INC.
1042 Garson Ave. Rochester, N. Y.

MANUFACTURERS OF LIGHTNIN PROPELLER TYPE MIXERS

We are pleased to announce the new

"HAGERTY HANDY FILLER"

■

The Practical

HAND FILLER

for creams, lotions and all liquids, which can be used on any type of jar and bottle.

■

Write us for illustrations and prices.

■

HAGERTY BROS. & CO.
10 PLATT ST. NEW YORK CITY, N. Y.
EST. 1849

REBUILT EQUIPMENT

overhauled at our Newark Plant—covers 8 acres —modern machine shop—railroad siding.

2—World Rotary Automatic Labelers.
8—World, Ermold and National semi-auto. motor driven Labelers.
1—World Automatic straight line Duplex Labeler.
1—McDonald "Weeks" type Automatic Duplex Labeler.
4—Kramer Screw Cappers, adjustable.
2—Pneumatic Scale Automatic Screw Cappers.
1—Pneumatic Scale Packaging Unit, carton feeder, top and bottom sealer, 2-stage weigher, Wax liner unit.
2—Samco Jr. Vacuum straight line Fillers.
5—Gravity and Vacuum Bottle Fillers, 2 to 6 spout.
1—National MG Powder Filler and Weigher.
1—Ferguson "Packomatic" Filler, Weigher and Sealer.
2—Ferguson Carton Wax Wrappers.
Tablet Machines—4—Colton 2B, ½"; 1—Mulford, 1¼"; 2—Colton No. 2 Rotary, 5/8"; 1—Stokes Rotary D, 1"; 1—Stokes Eureka hand, ½".
1—Colton 2B Gelatin Coating Machine.
3—Colton Dry and Wet Granulators.
Dry Powder Sifters and Mixers, lab. size to 4000 lb. cap.
5—Pony Mixers, Day and Ross makes, 8 and 15 gals.
3—500 gal. and 2—200 gal., Pfaudler glass-lined Tanks.
5—Jacketed Closed Glass-Lined Kettles, 120, 200, 250, 300 gal.
1—Urie Universal Tube or Jar Filler, motor driven.
1—Colton No. 10 worm type Paste Filler, for cans or jars up to 1 qt.
2—Karl Kiefer Visco Piston type Jar Fillers.
MISCELLANEOUS—Kettles, Drug Mills, Ointment Mills, Pulverizers, Grinders, Sifters, Screens, Colloid Mills, Filters, Filter Presses, Coating Pans, Pill Mass Mixers, Pot Mills, Tanks, Stills, Agitators, Pumps, Boilers, etc. Send for complete bulletin.

What have you for sale? Send us a list.

Consolidated Products Company, Inc.
20-21 Park Row New York, N. Y.
Warehouse and Shops: 331 Doremus Avenue, Newark, N. J.

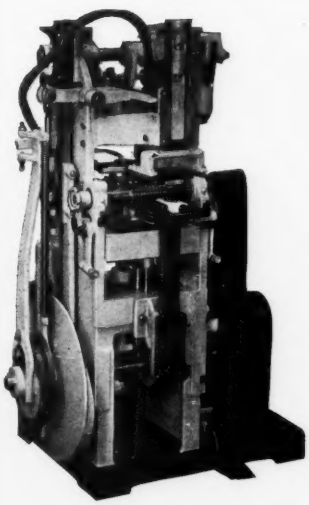
PYGMIES or **GIANTS**

save money—by labeling them ALL; perfectly on the

Pony Labelrite

This, finest of all labelers, is as meticulously exact on tiny flasks as it is on larger bottles or jars. Eliminates wiping of bottles because there is *no* glue seepage . . . Variable speed control . . . self-cleaning.

- PERFECT REGISTER
- HANDLES PLAIN OR EMBOSSED PAPER OR FOIL
- ANY SHAPE LABEL
- "PETTY-CASH" COST OF CHANGE PARTS



There is real economy in labeling items for the "mass" trade . . . perfect register and all edges glued down,—so essential for the "class" trade. Manufacturers who have bought one Pony Labelrite for "proof" are converting to this ideal, hand or automatic feed unit as standard equipment.

Send for complete, illustrated catalog:

NEW JERSEY MACHINE CORPORATION

16th St. & Willow Ave., Hoboken, N. J.

Chicago Office: 549 W. Washington Blvd.

L. H. Butcher Co.—Los Angeles, San Francisco R. S. Gold—Toronto, Canada

Something NEW in Tablet Coating Pans!

No. 4 STAND WITH COPPER PAN

The new electric direct drive stand for copper or galvanized iron tablet coating and polishing pans is the first important departure in the design of such pans in many years.

The new Colton Direct Drive Coating Pan is a complete self contained unit having its own direct drive mechanism mounted on the base, thus eliminating all belts and shaftings and making a pan much quieter in operation and very much easier to operate. The shape of these pans and the angle at which they are set are correct to give finest results in coating and polishing and are based on Arthur Colton's many years of experience of building such equipment for the drug industry.

These pans are made of copper or galvanized iron in a complete range of sizes and capacities to suit your requirements. Polishing pans can be lined with canvas at a small extra cost.

Send for our new circular

THE NEW ELECTRIC DIRECT DRIVE STAND

ARTHUR COLTON COMPANY

2620 East Jefferson Ave. Detroit, Michigan

GALVANIZED IRON PAN

CYCLONAIRE

A high speed mixing unit for perfumes, pharmaceuticals, emulsions, extracts, etc., based upon a superior mixing principle.

The agitator is of the propeller type which forces a complete dispersion of the solution at full motor speed (1750 r. p. m.) in the direction of the shaft. The stream is deflected by the hemispherical bottom of the Chemical Stoneware vessel, producing a very active and thorough mixing action.

Other "Cyclonaire" features are: shaft and interchangeable propellers of stainless steel . . . tank of acid-proof stoneware . . . patented "Flexlock" sleeve of non-toxic type in drain faucet . . . easy to clean. A strong, compact and sanitary mixing unit.

Other U. S. STONEWARE Products:

1 **SUCTION FILTERS**

2 **STORAGE JARS and TANKS**

3 **MIXING TANKS**

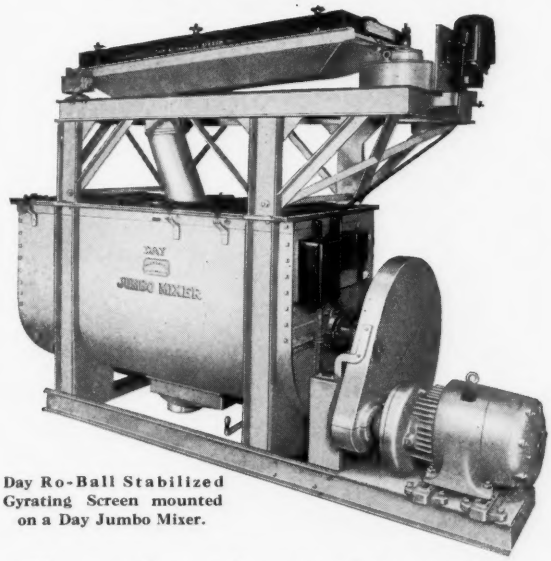
4 **"TORNADIC" PORTABLE MIXERS**

Send for Bulletin No. 106

THE U. S. STONEWARE CO.
AKRON, OHIO

MIXERS

DAY *SIFTING and MIXING EQUIPMENT..*



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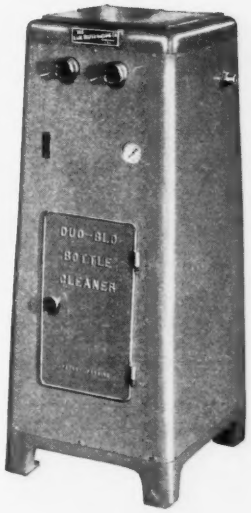

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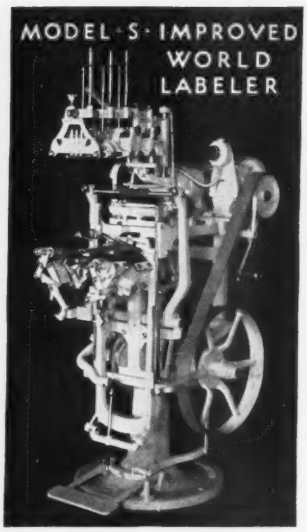

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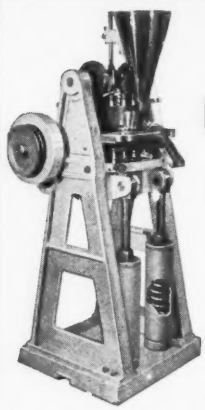

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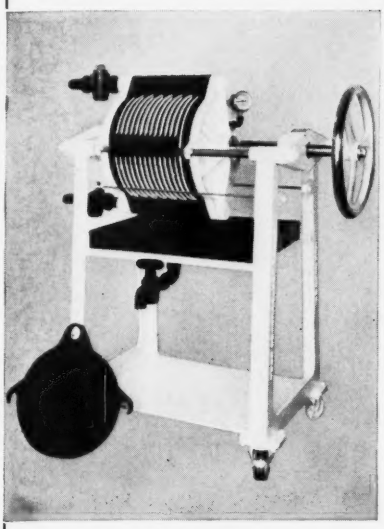

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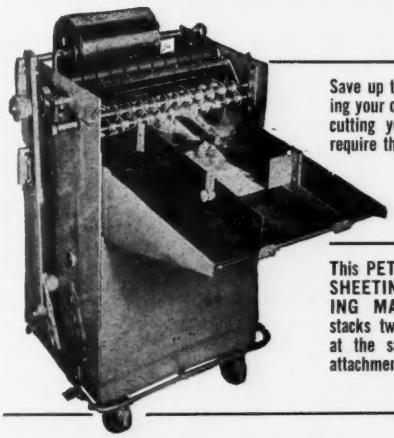

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Perfumers Shelf

HONEYSUCKLE

If one scans the newspapers closely these days, they will notice the trend toward articles on flowery perfumes and cosmetics.

The floral types which are generally accepted have been Gardenia, Carnation and Lilac but this Spring has marked a trend toward the development of new flower types, which can be exploited over the Easter holidays and also for summer wear. Honeysuckle is one of these types which, in the writer's opinion, has been badly neglected over the past several years. There is no doubt that certain types today, which are marketed as Bouquest Perfumes of the flowery type, are no more than honeysuckle compositions, under fancy names and it is not understandable why such a popular flower odor has not been promoted to any great extent by many of the larger perfumers under its own name.

A composition of the honeysuckle scent is one in which it is possible to obtain many variations but the standard type can usually be constructed by using as a base a very fine Orange Blossom type such a Loniceria Vidal-Charvet or Antherosia Naef; to this could be added a good artificial Jasmin and also slight touches of a very fine Lilac. Hydroxycitronellal, Dimethyl Acetal, Phenyl Ethyl Alcohol, Syringal, of Agfa, and Absolute Neroli are important adjuncts. Last but not least is a small amount of Indol tincture which is very necessary in developing a characteristic type. It will be noticed in examining many flower types such as Lilac, Lily of the Valley and Honeysuckle, that the flower itself conveys to the perfumer a marked presence of Indol. Unfortunately this material will discolor powders and cream and, therefore, must be omitted from formulas for this purpose but its addition is absolutely necessary in perfumes of the Honeysuckle type.

The perfume trend is still towards flowery types and the introduction of a honeysuckle perfume, together with other floral odors, in the writers opinion, would be a marked step in the development of a flower perfume which would, in the future, equal the recent popularity of Gardenia.

MIMOSA

Mimosa flower oil was first extracted from the blossoms at the end of the last century, and by 1926 it was estimated that about 80,000 kilos of the blossoms were being used annually. The oil is now sufficiently cheap to warrant its use in con-

"Sure, I know about feminine hygiene."

AN INVITATION

MANY an out-of-towner affiliated with the drug, perfume and cosmetic industries will find business or pleasure directing his path toward New York during the coming months. As a suggestion—and as a most cordial invitation to those planning such a visit—why not add to your list of "Things To Do In N. Y." this notation: *Stop in and see Fritzsche Brothers' Plant.*

Here you will have an opportunity to inspect an establishment rated among the finest and most modern of its kind. You will get an insight into the functioning efficiency of our service department; you will see how each individual problem receives the studied attention of a specialist trained in that particular line. You will see also our well equipped laboratories, our miniature soap plant and many other interesting and exclusive facilities for research into the hundreds of varied problems with which our organization is constantly employed.

Such a visit may encroach slightly upon your time, but even so, we feel sure you will look back upon it long afterwards as time well spent. Therefore, whether you are one of our patrons or not, we hope you will afford us the pleasure and privilege of conducting you through our plant. Won't you write us that you *are* coming?

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The great difference between this synthetic material and the natural castoreum obtained from beavers is one of cost. In actual appearance, odor and strength, it varies little from the genuine. For most practical purposes, CASTOREUM ARTIFICIAL F. B. should be used in the form of a tincture made in proportions of 2 ounces of the Artificial to 1 gallon of alcohol. In some formulae it can be used to replace the genuine castoreum completely; in others, most satisfactory results are obtained by combining it with the natural product. Its characteristic odor and fixation qualities render it especially adaptable to heavy perfume compounds of the Oriental type. Extremely low priced and effective, CASTOREUM ARTIFICIAL F. B. has much to recommend it to the producer of fine perfumes.

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Please feel that you can discuss your problems with us freely and in complete confidence. Many of our good customers do and oftentimes the results of our investigations point the way either to economies, to definite improvements in their formulae, or both.

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There have been offered, from time to time, numerous substitutes for natural civet. Careful examination and application of many of these have failed to reveal a synthetic capable of imparting the characteristic softness of odor for which the genuine product is noted. This has led us to the development of CIVET ARTIFICIAL F.B. —a *successful* endeavor to overcome this common deficiency. Imparting the odor character typical of natural civet, our Artificial resembles it closely in color and consistency, is much stronger and possesses a decided advantage in its solubility. In the form of alcoholic tincture, properly aged, it can be handled in fine perfume formulae in the same manner as Civet Absolute. Exacting perfumers will not be long in recognizing this new material for its true worth.

AMBERGRIS ARTIFICIAL F. B.

This is a remarkably exact, synthetic reproduction of ambergris. In matters of cost and convenience it offers distinct advantages over the genuine product. It is readily soluble in both alcohol and essential oils. Alcoholic tinctures made with AMBERGRIS ARTIFICIAL F. B. impart tenacity, fixation and stability to a high degree. Manufacturers who compound their own blends will find that it enables them to produce exquisite modern effects, perfumes embodying the so-called amber note and floral types such as lilac, at reduced cost and without noticeable effect upon quality. Perfumers using genuine ambergris or other natural or artificial fixatives are invited to sample any of the four synthetics described in this group and compare results carefully with the odor-effects they are now attaining.

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CONCRETE LABDANUM SEILLANS

In our opinion, this is the most powerful natural fixative available. Its fine, pervasive odor stands up almost indefinitely. It is suited especially for use in soaps (will not discolor), and as a basis for Oriental perfumes, powders, creams, men's shaving preparations, etc. Blends particularly well with pine. Is insoluble in alcohol.

ABSOLUTE OF LABDANUM SEILLANS

Possesses the same odoriferous principles and characteristics as the Concrete with the added advantage of solubility in alcohol. It represents the clean, refreshing fragrance of Labdanum at its very best.

OIL OF LABDANUM EXTRA FINE SEILLANS

This material is steam distilled from the Gum of Labdanum and contains the odor principle of the latter in its most concentrated and powerful form. It possesses a fine, clean amberlike note, is light in color and is soluble.

RESINOID LABDANUM, F.B.

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siderable quantity; its use is recommended in floral Colognes, honeysuckle, heliotrope, fern, new-mown hay, violet, lilac, etc. Although its initial odor is relatively weak, it possesses excellent fixative properties at a low price.

In compounding mimosa, the base should preferably be selected from hydroxycitronellal and its condensation products, anisic alcohol, terpineol extra, anisaldehyde from anethol, linalool from Bois de Rose, ionones, p-methylacetophenone, acetophenone, dimethylacetophenone, methyl salicylate, benzophenone.

As regards proportions, the base may consist of 30 to 50 per cent. of hydroxycitronellal along with 5 to 10 per cent. of terpineol extra. Or the hydroxycitronellal may be replaced by anisic alcohol and 5 to 10 per cent. of p-methylacetophenone and 10 to 15 per cent. of alpha amylcinnamic aldehyde.

For better products it is advisable to use good flower oil compositions including 20 per cent. mimosa absolute, 20 per cent. heliotropin flower oil, 10 per cent. ylang ylang oil Manila, 10 per cent. orris oil concrete or a good violet flower oil, 10 per cent. Bois de Rose and 10 per cent. anisaldehyde from anethol. Or the mixture may contain 30 to 45 per cent. of heliotrope flower oil, 10 to 15 per cent. jasmin synthetic, 15 to 25 per cent. ylang ylang oil, 15 to 30 per cent. genuine or synthetic cassie flower oil. Since the last is related to mimosa, a base might consist of 30 to 50 per cent. of cassie alone.

Neroli products are most valuable for bouquet purposes in mimosa mixtures. Rose compositions are also quite useful, while the bergamot complex imparts softness to the composition. Terpeneless bergamot is recommended for a particularly fine product.

Modifiers include a great many possibilities, some of which are tabulated below. Violet leaf absolute, tonka bean extract, coumarin, ethyl heptin carbonate, amyl and methyl heptin carbonates, methyl and ethyl octin carbonates, methyl and ethyl decin carbonates, jasmin absolute Palestine, jasmin absolute Grasse, mimosa and cassie absolutes, orange flower absolute, Bulgarian otto of rose, orris absolute and concrete, vanilla and orris resinoid, heliotropin, isoeugenol, benzyl isoeugenol, acetoisoeugenol, isoeugenol methyl ether, rhodinol, benzaldehyde, cuminic aldehyde, methyl nonyl acetaldehyde, C-16 aldehyde, hyacinth and jonquil absolutes, cinnamic aldehyde, anisyl acetate, lauric aldehyde, C-11 aldehyde, araucaria oil, helichrysum oil, zdravetz oil, vetiver oil Java, vetiverol, dimethyl anthranilate, amyl undecylenate, citronellyl isobutyrate, benzylidine acetone, benzyl acetate, vanillin, ethyl vanillin, phenylacetic acid, ethyl and methyl phenyl, acetates, geraniol, methyl laurate, phenylethyl phenylacetate.

Fixatives include guaiacwood oil, natural or synthetic cinnamyl alcohol, musk ambrette, musk ketone, musk xylol, civet, musk, coumarin, heliotropin, vanillin, tolu balsam, liquid styrax, benzoe resinoid, benzophenone, methyl naphthyl ketone, etc. *A. Wagner, S.P.C.*

CHEMICAL STABILITY

Very often it will be found that a change of note is due to the chemical instability of certain ingredients, usually aldehydes. In such circumstances the addition of fixatives such as benzyl benzoate, which depress the vapor pressure of the mixture, cannot possibly effect a complete cure, since such addition will have no influence on the rate of oxidation of the aldehydes.

The possibility of using the acetal in place of the parent aldehyde should be investigated. As a class, the acetals are superior in chemical stability and often not too different in odor from the aldehydes from which they are derived. Phenyl acetaldehyde dimethyl acetal is already well known, and others are coming into favor. Recent researches suggest that the surprising stability of certain aldehydes in alcoholic perfumes is due to the ease with which they form acetals in contact with alcohol. Usually a condensing agent is necessary to effect this change, but in some cases it appears to occur spontaneously without such assistance. The fact that most perfume aldehydes keep better when mixed with some alcohol has, of course, been common knowledge for many years. In other cases it may be found possible to find a substitute, similar in odor but chemically quite different and more stable.

Very often it is desired to give a compound, say, a lilac, the faintest possible trace of the almond note. For this benzaldehyde is the obvious choice. But benzaldehyde is notoriously fugitive as it is rapidly oxidized to odorless benzoic acid on exposure or when stored in half-empty bottles. Years ago oil of mirbane (nitrobenzene) was widely used for almond flavoring. Its use has been discontinued because of its poisonous properties, but a minute trace only for a handkerchief perfume is required.

Aubepine (anisic aldehyde) is less readily oxidized and is widely used. It is not, however, completely stable, and it is sometimes advisable to consider whether a partial substitution of this component can be effected in such a way as to improve the stability of a compound on exposure, without seriously altering the initial note. The most suitable substitute appears to be para-methyl acetophenone. The odor is not identical, but it is powerful, permanent and capable of giving very similar results on blending in the correct proportions. *P.E.O.R.*

ABSORPTION THROUGH THE SKIN

Experiments with ointments made with lard, petrolatum, hydrous lanolin, an absorption base, goose fat, bear fat, and a greaseless cream and lotions prepared with olive oil, cottonseed oil, lard oil mineral oil and peach kernel oil indicate that none of these is very efficient in promoting absorption of drugs incorporated in them through normal skin. Hydrous lanolin was somewhat more effective than other members of the series. All the fixed oils and fats penetrated the normal epidermis to but a slight extent.

The chief value of fixed fats and oils in therapeutics lie in their emollient and protective action and their function as fixatives which ensure long lasting contact of other chemicals incorporated in them with the surface to which they are applied.

A large group of essential or volatile oils, on the other hand, was readily absorbed through the intact skin of various animals, as indicated by physiologic and biochemical reactions occurring after their application. The following oils were examined: anise, asarum, bergamot, betula, caraway, cardamom, cassia, chamomile, cinnamon, citronella, cloves, coriander, eucalyptus, fennel, jasmine, juniper, cananga, lavender, lemon, marjoram, neroli, nutmeg, orange, pennyroyal, peppermint, rose geranium, rue, sassafras, spearmint, tansy, thyme, wintergreen.

Active constituents of essential oils were tested with regard to absorbability by the skin and proved to be as effective in this respect as the original oils. The list studied included benzyl alcohol, phenol, cymol, thymol, guaiacol, geraniol, menthol, linalool, apiol, carvacrol, eucalyptol, anethol, eugenol, safrol, isosafrol, amyl alcohol, hexyl alcohol, hectyl alcohol, octyl alcohol, nonyl alcohol, decyl alcohol, fenchyl alcohol, borneol, citronellol, nerolin, terpineol, asarol, benzyl benzoate, benzyl acetate, vanillin, coumarin, benzaldehyde, cinnamic aldehyde, citral, heliotropin, camphor, fenchone, menthone, carvene, pulegone, thujone, methyl salicylate, turpentine, pinene, dipentene, phellandrene, limonene, salicylaldehyde.

A number of the volatile oils as well as some of their constituents were successfully used as vehicles to introduce into the body various potent alkaloids and other drugs.

Toxicologic experiments with nicotine revealed that it is rapidly absorbed through both mucous membranes and intact skin. Advantage was taken of this toxicologic property of the drug in investigating its penetration through diseased and pathologic tissues of animals under deep anesthesia as compared with normal surfaces of the body. The studies revealed that normal skin and mucous membrane absorbed substances far more efficiently than did injured tissues. *David I. Macht, J. A. M. A. p. 409, (1938).*

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CLEANSING PADS

One of the newer and brighter merchandising ideas to hit the cosmetic market is the use of pads saturated with cleansing mixtures. These thin pads, packed a dozen or more to the airtight package, are easily carried in the purse, are used once and thrown away, and do a fairly good cleansing job.

The possible mixtures that could be used to saturate the pads is large in number, and only a few will be mentioned at this time. Light mineral oil itself is a good cleanser, but it is of only limited application, since it leaves the face greasy. Alcohol is a good cleaning agent, but may be irritating if used in concentrated form, and will evaporate from the pad quite rapidly. If, however, the alcohol is mixed with diethylene glycol ethyl ether, the preparation will be reasonably lasting and effective. Solutions of wetting or detergent agents in mixtures of water, alcohol, and glycol ethers should be effective skin cleansers. A mixture that has been recommended consists of a thin, slightly oily liquid cream. Using one to two per cent. of glyceryl monostearate or triethanolamine oleate as the emulsifier, from one to three per cent. of mineral oil is emulsified in water. Since the mixture is used to saturate pads, complete stability is not essential.

As a footnote, the idea of pads has spread to nail polish remover pads (or maybe these came first). These are circles of fabric impregnated with a almost any high-boiling lacquer solvent. One of the almost odorless esters used in certain types of lacquers is to be preferred.

PILOCARPINE IN HAIR PREPARATIONS

Pilocarpine in the treatment of alopecia is applied in a lotion. Either the nitrate or the hydrochloride is effective, the only difference between them being the solubility. This would make no difference in the usual lotion, which contains only 0.5 per cent. of the drug. Toxic alopecia, the partial baldness that follows fevers, pregnancy, or other toxic conditions, responds in most cases promptly, in a few months. Alopecia areats is difficult to prognosticate, one case clearing up in a few months, another apparently similar case refusing to improve after years of energetic treatment. Seborrheic alopecia can usually be brought to a cessation of hair loss in a few months. Congenital alopecia and senile baldness are usually resistant to treatment.

Among its other effects, pilocarpine stimulates the sweat and sebaceous glands and has a reputation among dermatologists as a stimulant of hair growth. Jackson and McMurtry (Treatise on Diseases of the Hair) state that "a host of medicinal agents have been recommended for stimulation of the hair. The only one that seems to exert a specific action is

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pilocarpine." Not only does it stimulate, in rare instances it causes the hair to become dark. This has been noted from both internal use of the drug and following its use in a lotion. *J. A. M. A.*

METAL SALTS AND ACACIA

The viscosity of Gum arabic solution is directly proportional to the concentrations in solutions of 1, 2, 3, 4, 5, 10, 12 and 20%. When ferric chloride is added to solutions of gum arabic, the viscosity of the solution is at first decreased; on the further addition of iron, the viscosity increases to a maximum, the mixture becomes jelly-like; and further addition causes a liquefaction, and the viscosity drops to a value lower than that of the original solution of gum. The minimum and maximum points in the curve are more pronounced in the more concentrated solutions of gum and occur at approximately 0.001 and 0.002 Gm. ferric oxide per cc., respectively. Time elapsed between addition of iron and measurement of viscosity is important. Ferrous iron has no effect, but chromium and aluminum chlorides produce similar changes, as do also ferric sulfate and ferric nitrate. Measurements were qualitative except in the case of ferric chloride.—*R. Haller and B. Frankfurt. Kolloid-Z.*

HAIR STRAIGHTENER

Stannous compounds such as stannous chloride (0.3 to 8.0%) and sodium zincate (0.3 to 8.0%) are used with sodium hyposulfite (2 to 15%), sodium polysulfide (0.5 to 18%) and a mineral binder such as magnesium hydroxide (25 to 50%), etc., which are reacted together.—*Julian Y. Malone, Joseph H. Carroll and Charles R. McKee, ass. Perwavy Co., U. S. pat. 2,087,953.*

DETERMINING EMULSION TYPE

Several methods are available for indicating if the continuous phase in an emulsion is oil or water: of these, the color indicator method and the drop method are the more usual. Another method depends on the conductivity of the continuous phase when aqueous, and the increase in resistance to infinity as the emulsion changes to the water-in-oil type, this increase being measured by means of a milliammeter in series with it and a source of high potential. The conductivity method shows several advantages over the others. The author employed another method, using a neon tube instead of a milliammeter. At first a neon valve of the disc televisor type was employed, but later was discarded in favor of a small neon tube taking only 0.2 m/a at 200 volts, which gives, by a decrease in intensity and length of glow, an indication of the increase in series resistance up to 5,000,000 ohms. At this point it is extinguished when used, as it was throughout the experiments, on 250 volts fifty cycles mains. To prevent damage to the tube a 20,000 ohm resistance was left permanently in circuit. The electrodes were of platinum wire fused into glass tubing. A small residual glow due to capacity effects was removed by means of a condenser of optimum value 0.001 mfd. in parallel with the lamp. To test the apparatus a 0.5 per cent. solution of oleic acid in olive oil was prepared, 10 mils of this mixture being equivalent to 1 mil N/2 NaOH. 30 mils was emulsified with 3 mils N/2 NaOH. Upon testing by inserting the electrodes, the maximum glow indicated oil/water. N/2 $CaCl_2$ was then added slowly from a burette, with continuous shaking. The glow diminished, and upon the addition of 2.9 mils was extinguished, showing complete reversion of emulsion type had taken place. Several samples of ung. aquos. were prepared, and the apparatus used to indicate change of emulsion type during preparation. Upon the addition of the borax solution to the oil liquid (both at 80° C.), an oil/water emulsion was formed. During cooling with constant stirring very little change was noticed until the temperature reached 40° C., after which there was a gradual change to water/oil. The reversion did not go to completion, as indicated by a curious flickering at the minimum glow. A number of commercial samples gave similar results. This indication that ung. aquosum, B.P., consists largely of a water-in-oil emulsion, with a proportion of oil-in-water emulsion, is supported by the fact that on the addition of water to the preparation the water separates out but is milky looking due to solution of the oil-in-water phase. *Wm. J. Puller, Chemist & Druggist.*

SHAVING CREAMS

Shaving soap should meet the following requirements:

1. Pure white color.
2. Ready and stable lather.
3. Soft enough to be readily picked up on a brush.
4. Complete saponification.
5. Freedom from skin irritation.
6. Should be superfatted.

Some authorities give a maximum value for excess alkali of 0.03 per cent. while others limit it to 0.01 to 0.015 per cent. Some neutralize the soap and then add excess stearic acid. This should not be carried too far as some skins may be sensitive to even this acidity. Addition of as much as 2 to 3 per cent excess stearic acid sometimes causes a coating to form on the surface, and this layer is more acid than the rest of the soap.

The important function of shaving soap is the softening action on keratin, the principal constituent of hair. This softening action is held to be dependent on the content of potassium soap, which also increases lather. Glycerine may be added to increase softening action. Some have recommended up to 20 per cent. of glycerine, but this figure is too high because of the adverse effect on lathering power. Triethanolamine has a softening and swelling effect on hair without injuring the skin in any way. Because of its high price, triethanolamine is seldom used alone but may be combined with other alkalies.

The use of sodium metaphosphate in minute amounts has a water-softening effect so that the soap is more efficient, and increases the lather. About 0.5 per cent. is a suitable amount.

In making shaving soaps, the total fat stock should always be melted first and then filtered through cloth. This is of special advantage with stearic acid since in spite of its pure white color, it will sometimes be found after melting that a small amount of dirt was occluded. Saponification is usually carried out with a mixture of potash and soda lye. Partial saponification with ammonia is also used. The proportions of potash to soda lye varies; usually being 1.1 or 2.1, a ratio of 1.5.1 of potash to soda can be recommended. The lye should be brought to the proper concentration and then allowed to stand at least overnight for dirt and insoluble material to settle out. It should then be purified by filtering through glass wool or asbestos, in order to obtain a completely clear solution. This small amount of additional work is well worth while. *D.P.Z. p. 415 (1937).*

AEROSOL WETTING AGENTS

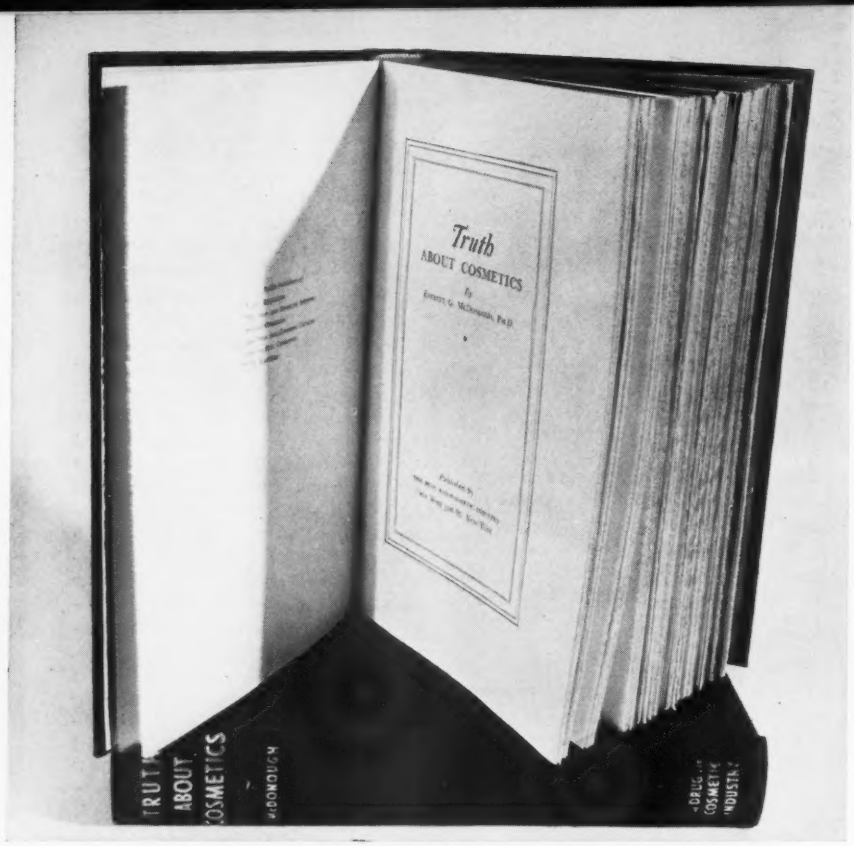
This is the title of a new booklet being distributed by the American Cyanamid and Chemical Corporation and describing the properties and applications of four types of aerosols. The OT type is nontoxic, completely neutral in solution, and stable to hard water. Formulas and descriptions are given for the use of Aerosol OT in oral antiseptics, cosmetic creams, hand lotions, dentifrices, hand cleaners, mineral oil emulsions, shampoos, etc.

VITAMIN F OINTMENTS

A proper vitamin F preparation for the treatment of a variety of skin blemishes, including allergic eczema, may be prepared as follows: lecithin 2.5 (this lecithin should be 40% vegetable lecithin and 60% bland oil, *e. g.*, soy bean oil), anyhdrous lanolin, 10.0 and vitamin F concentrate 3.0. To make a more elegant product, the following formula has been found satisfactory: lecithin 7.0, anhydrous lanolin 35.0, vitamin F concentrate 11.5, special lard 46.0 and oil of peppermint 0.5. *M. L. Weinstein and Kathryn Glennon. Illinois M. J.*

TRIOFORM

Trioform, a mixture of chloro-thymol and -xylenol in oil, in dilutions of 1/100 to 1/3000 is bactericidal for most pathogenes and in most cases superior to more concentrated solutions of some organic mercury compounds. *E. Gottsacker. Arch. Hyg. Bakt.*



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8 Cosmetic Colors
9 Cold Cream and All-Purpose Creams
10 Creams and Lotions
11 Foundation For Make-Up
12 Make-Up Preparations
13 Face Powders
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16 Nails, Hands and Arms
17 Hair Dyeing
18 Other Hair Preparations
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20 Permanent Waving of Hair
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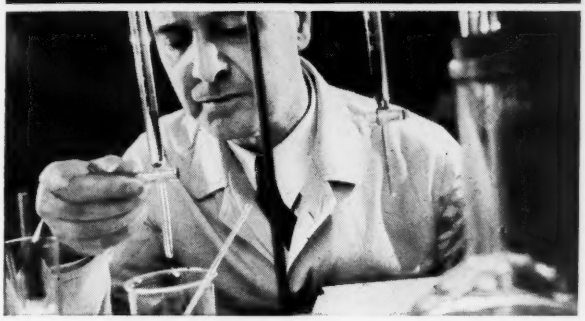

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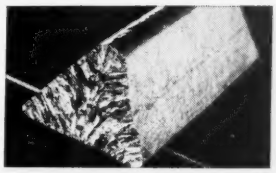

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ADVANCING THERAPY

GONORRHEA AND SULFANILAMIDE

In view of the widespread interest in sulfanilamide and related compounds in the treatment of gonorrhea, the work of Johnson and Pepper on this subject is of interest. Twenty-four patients were given a benzyl sulfanilamide (*P*-benzyl-amino-benzene-sulfonamide), a drug as yet not on the market in this country, and seventy-five were given sulfanilamide (thirteen were given courses of both drugs). Of the twenty-four patients given this benzyl sulfanilamide, fourteen were treated for ten consecutive days with a minimum ten day dosage of 600 grains (40 Gm.). Only two of the entire group seemed to be improved. For the seventy-five patients given oral daily divided doses of sulfanilamide, an average of 80 grains (5 Gm.) was given for two or three days, followed by 60 grains (4 Gm.) for from two to four days, with subsequent reduction to between 30 and 45 grains (2 and 3 Gm.). Of the sixty-four patients of this group seen sufficiently long to analyze the results, more than half represented failures, based on an arbitrary ten day standard. The observations of other workers, however, on the frequency of development of complications, were corroborated and only eight of the twenty-seven cases of anterior urethritis became posterior. Two cases of epididymitis and one of periurethral abscess developed while on treatment. Fifty-five per cent. of the sulfanilamide group and 50 per cent. of the benzyl sulfanilamide group showed toxic symptoms, including malaise, headache, dizziness, palpitation, cyanosis and dyspnea in the majority. As a result of the somewhat disappointing observations the authors feel this type of therapy should not be employed in the routine treatment of outpatient gonorrhea. The danger of the toxic reactions is not offset by the percentage of cures. Furthermore, unless patients are carefully warned that rapid relief of symptoms does not constitute a cure, there will be a large increase in carriers of the gonococcus loosed on the public. This work represents an additional argument for the careful administration of this group of drugs, since they appear to be of considerable value in some cases of the disease.

MONOCAINE LOCAL ANESTHETIC

With the aid of a new local anesthetic, called monocaine, "there is no operation in dentistry which cannot be performed without actual pain," members of the Philadelphia County Dental Society were told by Dr. Fred R. Adams, past president of the Second District Dental Society of the State of New York.

Submitting the first clinical report on the chemical, which was developed by Dr. Samuel D. Goldberg of Brooklyn, and which has been tested by ninety-five dentists during the last year or so, Dr. Adams said that the results showed it gave patients none of the so-called "jitters" which often follow dental injections and that it produced a deeper and quicker anesthesia than procaine (novacaine) or other local anesthetics.

"From the evidence available," he declared, "it would seem to be the answer to our prayers for an anesthetic which can be made up into a stable solution, which is more potent than procaine, which has no disagreeable or dangerous systemic effects and which acts rapidly."

Monocaine is really mono isobutyl amino ethyl para amino benzoate hydro-

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chloride. Dr. Ames said the solution ordinarily used was one of three-fourths of 1 per cent monocaine and epinephrin 1-75,000. At the suggestion of Dr. Goldberg he began testing the chemical and asked a number of his friends to do likewise.

"The results which I obtained with monocaine and the results obtained by this group are remarkable," he said. "Not an individual of this group reported any sign of physical discomfort following an injection and some have used it upon patients who have always had disturbances following procaine injections.

"No one has reported a failure, and all are agreed that the anesthesia has a more rapid onset than any solution of procaine they have used. Nearly all are agreed that there is more profound anesthesia than with procaine. These twenty-five men made between 200 or 400 injections and I have made individually 400 or 500. There has been every type of injection for every type of operation. It hardly seems possible that any reports could be as good as these have been."

In addition to this selected group of twenty-five dentists, seventy others, covering most of this country and Canada, have tried the new anesthetic and reported "complete anesthesia" in 93.5 per cent of the cases. About 150,000 injections have been made.

"In this 6.5 per cent of the cases which did not show deep anesthesia were all of those which were the result of poor technique," Dr. Adams asserted.

"In the group which I chose, out of the 3,043 cases, three had post-injection pain and this might possibly have also been due to poor technique. There were eleven reports of physical disturbance, or one in about every 300 cases. Some of these, too, in all probability were mental instead of physical disturbances.

"We can make an injection without pain, we can prepare a cavity, grind a tooth for a crown, remove an old filling, do extractions and surgery without pain with monocaine, and these operations can be performed without the disagreeable aftereffects or the dangers which we sometimes have with procaine."

Dr. Adams told the society that monocaine apparently could be used with safety by dentists on cardiac cases.

VIRUS TREATMENT

A chemical agent that has cured distemper in dogs, ferrets and cats, the first drug in medicine to cure, as well as to prevent a disease due to a virus, is announced in Science, official organ of the American Association for the Advancement of Science.

The report is presented by Professor Alphonse R. Dochez and Dr. C. A. Stanetz, department of medicine and department of animal care, College of Physicians and Surgeons, Columbia University, and the Presbyterian Hospital.

The new chemical is known as sodium sulfanilyl sulfanilate. It contains five atoms of oxygen, three atoms of hydrogen, two atoms of nitrogen, two atoms of sulphur and one atom of sodium.

This compound is a white crystalline substance highly soluble in water and of neutral reaction. "It is readily absorbed by way of the gastro-intestinal tract, and has little or no toxicity for small animals in doses equivalent to one gram per kilogram of body weight. Ferrets, rabbits and cats have received one gram per day for periods as long as two weeks without loss of weight, appetite or other untoward symptoms."

The drug was first used experimentally on ferrets by producing the disease artificially. After these experiments had proved that the drug is harmless to the animal and that it serves both as a preventive and a cure, the drug was used clinically on dogs seriously ill with spontaneous distemper.

"Of twenty-eight animals treated at varying stages of the disease," the report states, "twenty-six have recovered. Symptoms and fever disappear rapidly and the appetite promptly returns. The animals remain well after cessation of treatment.

"One animal treated on the fifth day of the disease recovered within forty-eight hours and thereafter remained well. The amount of drug administered to dogs has been one gram twice daily.

"Eighteen cats suffering from a spontaneous disease commonly known as cat distemper or influenza have also been treated with the drug. Its effect in this condition is in all respects similar to that in canine distemper.

"The drug therefore appears to be the first chemical agent to have such definite therapeutic action in an infection due to a filterable virus. The range of its activity in virus diseases remains to be explored."

QUININE DERIVATIVES IN PNEUMONIA

Johnston and his associates present data which indicate that ethylapocupreine, hydroxyethylapocupreine and ethylhydrocupreine each possesses power to destroy pneumococci, regardless of type, in high dilution. The compound apocupreine showed also, in test tube experiments, considerable power. Strains of pneumococci showed some variation in their susceptibility to these compounds. Occasional extremely resistant strains were encountered, a few of which may have exhibited an acquired "fastness." However, the susceptibility of most strains fell within a reasonable range of concentration. The compound ethylapocupreine killed pneumococci in vitro in the highest dilutions, followed by ethylhydrocupreine, apocupreine and hydroxyethylapocupreine. Pneumococcidal power appears in the serum of animals or of men who have received as little as 10 grains (0.65 Gm.) by mouth of ethylapocupreine or hydroxyethylapocupreine but did not appear after similar doses of apocupreine. Such pneumococcidal activity appeared from within one and one-half to two hours after administration by mouth and persisted as long as the compound was given. Intramuscular injection gave a more prompt appearance of the substance in the serum, but the actual potency of such serum did not appear greater than when it was given by mouth. Intramuscular or subcutaneous administration cannot be used clinically because these substances give rise to local necrosis at the site of injection. *J. Pharm. & Exp. Therap. p. 364 (1937).*

CONGO RED IN TUBERCULOSIS

Bassi administered intravenous injections of 10 cc. each of a 4 per cent. congo red solution to fifteen patients who were suffering from pulmonary tuberculosis. The injections were given every other day up to a total of five or six. The solutions were freshly prepared and slowly administered to patients with a fasting stomach. The treatment is well tolerated. It improves the general and nutritional conditions of the patient, stimulates the formation of platelets and leukocytes, with predominance of neutrophils or lymphocytes, and diminishes the tendency to hemorrhage and toxemia. It does not injure the kidneys. Daily administration of the same doses induces leukopenia. The treatment has no effect on fever. *Lotta Contro Tuber.*

STERILIZATION BY HEAT

According to H. W. Tomski and L. J. Waller, since aqueous solutions of sodium phenobarbital, now often used for injections, are unstable upon keeping, the loss was determined under different experimental conditions. The loss by heat depends upon the temperature, time of exposure to heat, alkalinity, and on the concentration of the solution. A twenty per cent. solution loses twenty per cent. on autoclaving at 115° C. for thirty minutes, ten per cent. on steaming at 100° C. for one hour, six to seven per cent. on tyndallization, and one per cent. when the solution is sterilized by the British Pharmacopoeia emergency method. When a twenty per cent. solution is sterilized by heat, it forms, on cooling, a white precipitate of phenylethylacetylurea. Solutions of sodium phenobarbital should have a pH as low as possible, should be sterilized by filtration only and be stored for short periods in a cool place.

T. H. Hopper reports on the sterilization of manganese butyrate solutions and arrives at similar conclusions. Solutions of manganese butyrate of the strengths usually employed cannot be sterilized by any process involving the use of heat, and must therefore be sterilized by filtration. *Pharm. J.*

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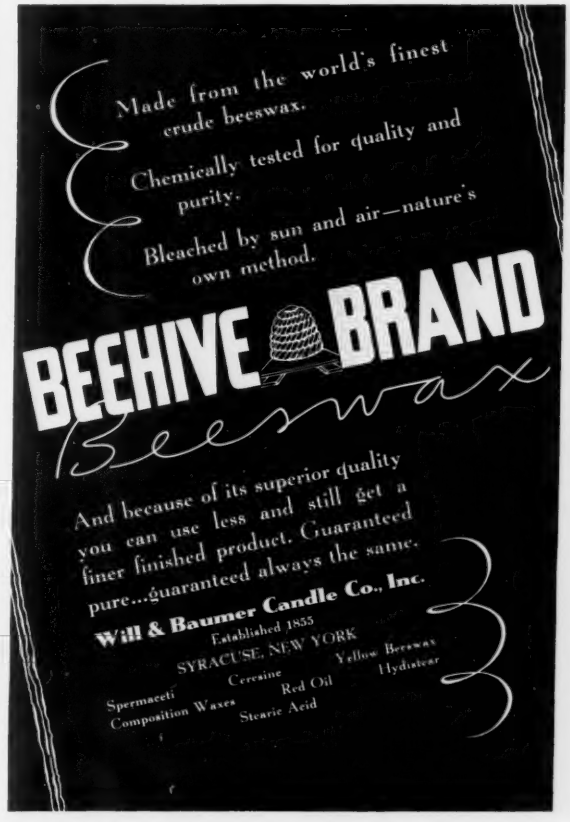
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READERS'

PERMANENT WAVE LOTION: I have some questions to ask about a permanent wave lotion you published in a previous issue. The lotion has the following formula:

Ammonium carbonate	*2.00*
Potassium carbonate	*1.40*
Potassium sulfite	*2.50*
Ammonia	*3.25*
Sulfonated castor oil	*1.00*
Water	*89.85*

Are the weights of the salts on an anhydrous basis? May the cheaper sodium salts be used in place of the potassium salts? Can you suggest any improvements? Paterson.

In a mixture of this type, there is no reason to believe that proportions are at all critical. It is therefore quite possible to replace potassium by sodium salts. Formulas we publish generally call for the most common commercial variety of the chemical, unless another grade is specified. In this case, the ammonia is the concentrated ammonia water. Potassium and sodium salts may often be interchanged if due consideration of the different molecular weights is taken into consideration. Differences in pH values and in solubility may also have to be considered under certain circumstances. At this stage, we can suggest no improvements, until you can say in what way you require a change.

PRESERVATIVE-STABLE VANISHING CREAMS: In the manufacture of a lotion in cream form, I have been using tragacanth, but this ingredient is not entirely satisfactory for the reason that I have experienced deterioration, although I have used benzoic acid as a preservative. There is no other item in my product that requires preservation and I want to eliminate this necessity. Apart from this objectionable feature, tragacanth does not give as smooth a product as I desire.

There must be some substitute for tragacanth which would not require any preservative and would remain stable over a period. I have worked through the gum category, and tragacanth is the least objectionable of all. From my observation of the commercial products, however, cosmetic manufacturers must have discovered a satisfactory substitute for tragacanth.

Another thing that bothers me is the evaporation of moisture from vanishing creams. I appreciate that glycerin would tend to lessen the rate of evaporation, but this product is too sticky for use. Kansas City.

There is, in our mind at least, no mystery about gums used in commercial products. Tragacanth and karaya are the most popular, with quince, locust bean and others also being used. What manufacturers have learned, after sad experience, is that a good preservative is essential and that benzoic acid, under alkaline conditions, is not a good preservative. Use methyl parahydroxy benzoate. As regards the gumming properties, you must experiment not only with individual gums, but also with mixtures, until you get what you want. The ethyl ether of diethylene glycol and sorbitol solutions do not have the disadvantages of glycerin as regards stickiness and at the same time serve to prevent drying out of the cream.

PRECIPITATED PINE BATH: We are having a local concern make for us a Pine Bath Oil, according to our own formula, and on standing this product develops a decided brown precipitate. We would appreciate any advice you may be able to give us to overcome this precipitation. Chicago.

Sulfonated castor oil might be responsible for the precipitation, but the Siberian Pine Needle Oil is much more likely to be the offender. This oil is often a relatively crude product, containing enough tar to cause the trouble you describe. Either you should change your grade of pine oil, or you will have to store your product until the precipitate forms, filter it, and then fill into bottles.

PRESERVING WAVE-SET CONCENTRATE: I have been using paraformaldehyde in a wave-set concentrate. In one case I found that the paraformaldehyde decomposed, yielding a terrific stench of formaldehyde. Considering that a small amount of paraformaldehyde will yield a larger amount of formaldehyde solution, can the concentration of paraformaldehyde be cut below the customary 0.1% based on the finished solution? Newark.

When a gum solution goes bad, the stench is truly terrific and it is not possible to identify the odor. What you probably smelled was not formaldehyde, but decomposed gum, the paraformaldehyde proving ineffective. Methyl parahydroxy benzoate is the preservative we generally recommend, even though its price is somewhat higher. It should be used in concentrations of 0.1% based on the weight of the finished solution.

DRY SHAMPOO: I would appreciate suggestions for a formula to be used as a dry shampoo. I have seen several suggested mixtures containing starch, orris root powder, bran, etc., but I would like to omit these from the formula. St. Louis.

A mixture that has been suggested along the lines you have in mind consists of 80 parts of sodium bicarbonate, 10 parts of ammonium carbonate, and 10 parts of borax. As with other products of this type, the powder is sprinkled on the hair at night and then thoroughly brushed out the next morning.

QUESTIONS

NEUTRAL SOAP: You have advised and helped others so admirably with their problems in your "Readers Questions," so I am coming up with my troubles. I have tried to make a liquid soap having a pH about 8.3 or 8.5. I am experimenting with a cocoanut oil soap base of 60% anhydrous soap. I dissolve the soap in distilled water and it contains 22% anhydrous soap. The finished product has a pH of 10.1. I have tried to bring this down by the use of oleic acid and stearic acids—By digesting stearic acid in the liquid soap at 60° C. for a half hour, I can make the pH 8, but it becomes turbid at about 48° F. I have not been able to filter out this turbidity, have also tried to use glycerine 5% in the soap to keep this stearate soap from becoming turbid at so high a temperature. I would like your advice as to how to reduce the pH to 8 and at the same time keep the product from becoming turbid. Your answer may also help others with a problem of similar nature. If it is at all possible, I would certainly appreciate a personal reply as soon as possible. Seymour, Ind.

You will find that articles on shampoos in the February and March issues of this magazine will probably put you on the right track. If you will use free fatty acids plus triethanolamine, you should be able to get a liquid soap with a low pH value.

STYPTIC SOLUTION: Kindly advise us how we can make a stainless, germicidal, antiseptic, styptic solution. Pittsburgh.

The alum salts are the most generally satisfactory styptic compounds, since they are stable and may be used as sticks, in powder form, or in solution. In your case, a five or ten per cent. solution of alum in water should make a satisfactory styptic solution. It will be non-staining, but its antiseptic value can only be determined by test.

HEATING PAD: I have been experimenting with a formula containing barium hydroxide, aluminum and powdered talc. The mixture is used for a machineless permanent wave pad. This mixture heats up to 190 to 200 degrees Fahrenheit, which is not hot enough. Can you give me any suggestions for making a mixture that will give a higher temperature? Camden.

A large number of suggestions are embodied in the patent literature, but these cannot do you much good. The only suggestion we can make is the reduction in the amount of talc, or even its complete omission. A great deal might also depend upon the fineness of the aluminum and barium hydroxide powders.

CLEANSING PADS: Can you tell me what cleansing pads contain that enable them to retain their moisture? Norfolk.

The information on cleansing pads that we have on hand to date is given in a note in the "Compounders' Corner" in this issue. A combination of a fair content of diethylene glycol monoethyl ether with a good package is probably the best solution to your problem.

COAL TAR OINTMENT: We would greatly appreciate receiving a formula for an ointment containing washed coal tar, to be used in treating certain skin conditions. Allentown.

An ointment of this type can be made very simply and consists of equal parts of petrolatum and washed coal tar. Simply melt the two substances together and stir until homogeneous. If the consistency of the mixture is not what you expect it to be, it can be modified by the use of mineral oil to make a softer product or paraffin or beeswax to increase hardness.

ALKALINE LOTION: In the formula I enclose, the pH is 8.3 and I am unable to reduce it below this figure. Have you any suggestions as to how I can make this lotion less adhesive. Milwaukee.

There is not much hope of lowering the pH of your lotion, since it depends for its emulsifying power on triethanolamine stearate which hydrolyzes to give some free alkali. Some improvement might be obtained by increasing the proportion of stearic acid so that it is present in excess. You will have better luck, however, if you will work with one of the proprietary emulsifiers for acid emulsions.

POMADE: I have a pomade which is too heavy, but at the same time does not have the stickiness and adheviseness that I think a product of this type should have. Can you suggest modifications that will improve the product. Des Moines.

Your pomade probably contains only petrolatum, which accounts for its shortcomings. This is a fine basic material, and is a necessity in a great many preparations, but its properties must often be modified. In this case, add mineral oil to make a lighter mixture, and lanolin to increase stickiness and adhesiveness. A pomade base consisting of about 30 parts of lanolin, 50 parts of petrolatum, and 20 parts of oil should answer your purpose.

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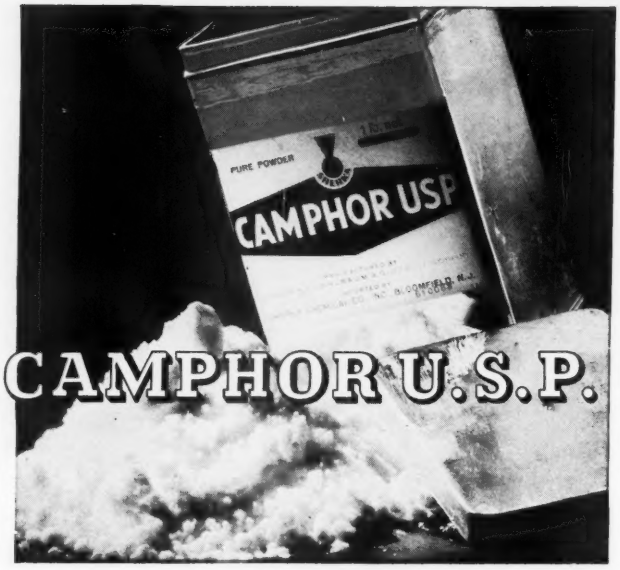

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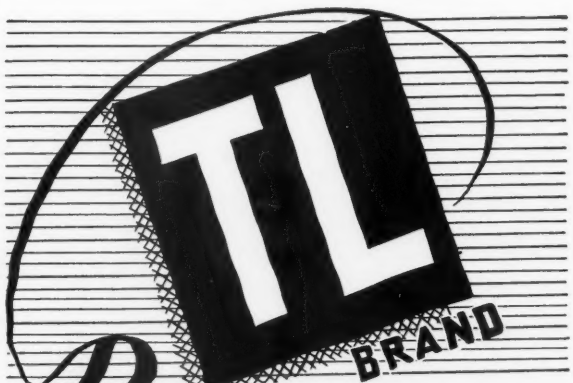

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Rochelle Salt 1c
Senega root 8c
Sedlitz mixture ¾c
Tansy oil 40c

Down

Agar No. 1 5c
Alcohol No. 1 Spec. 2c
Aloes, Curacao 6c
Angostura bark 5c
Anise oil 10c
Balsam Copaiba Para 2c
Balsam Peru 2c
Barberry bark 2c
Belladonna leaves 3c
Buchu leaves 4c
Cascara sagrada 1½c
Chamomile flowers, Hung. 2c
Roman 1c
Cod liver oil $1.00
Colocynth pulp 3c
Coriander oil $2.00
Dandelion root 3c
Digitalis 5c
Echinacea root 1½c
Ephedrin Vulgaris 1c
Ergot 15c
Gentian root 4c
Geranium oil, African 15c
Bourbon 45c
Helonias root 5c
Lemon grass oil 7c
Lycopodium 10c
Menthol, Nat. 5c
Mercury, bichloride 8c
Calomel 10c
Red. Precip. 9c
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Mullein flowers 5c
Mustard oil, Artif. 3c
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Redist. 20c
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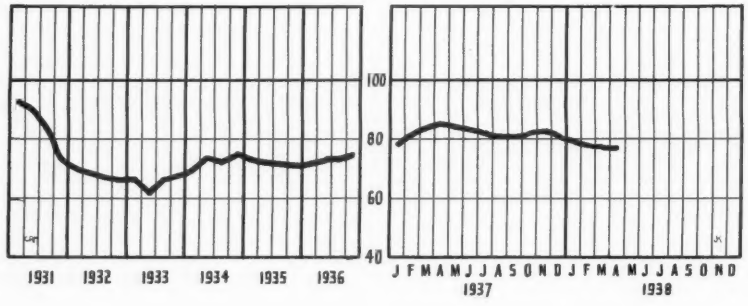
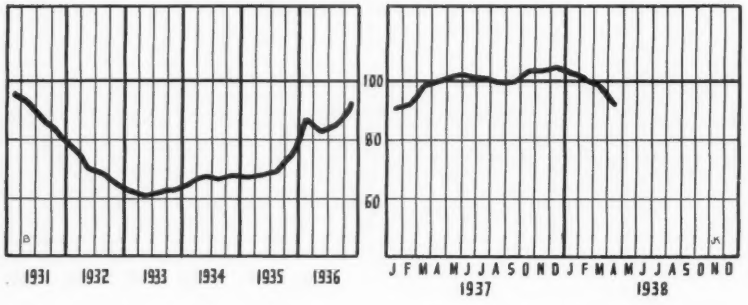
Santonin $2.00
Sarsparilla root, Mex. 2c
Valerian root 2c
Wahoo bark of root 10c
tree 3c
Wild cherry, Rossed 1c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100



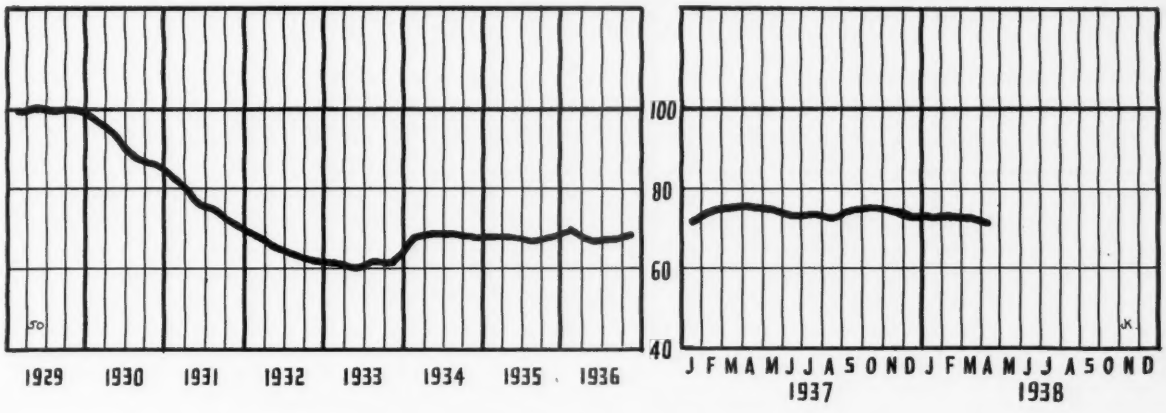
The cosmetic raw materials index declined slightly, from 77.8 to 77.4. Balsam copaiba declined from 26 to 24 cents; balsam Peru was off 2 cents at 75 cents; menthol lost 5 cents and reached $3.05. The general conditions affecting other markets were responsible for the easier price tendency in cosmetic raw materials.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index fell from 98.6 to 92.0 for April. Agar declined from 90 to 85 cents; aloes lost 6 cents to be quoted at 32 cents; belladonna dropped from 14 to 11 cents; buchu leaves declined from 45 to 41 cents; cascara sagrada was lowered from 11½ to 10 cents; ergot dropped from $1.40 to $1.25; gentian eased from 14 to 10 cents; ipecac registered the only increase in this index group, increasing 5 cents to $1.25.

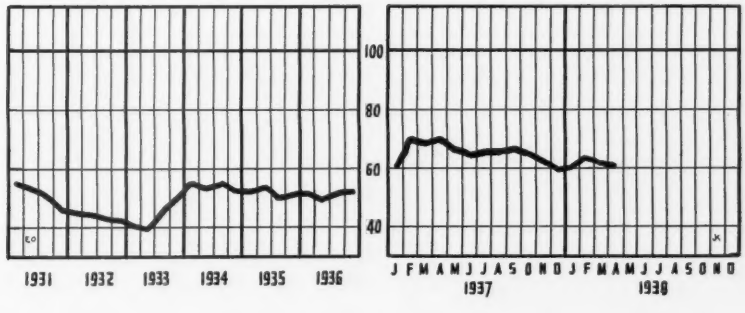
50 Raw Materials—Weighted Price Index. 1926 = 100.



The 50 commodity index declined from 73.1 in March to 72.0 for April. Declines were mostly of a competitive nature. Manufacturing buyers showed little interest in raw materials during the period under review. The one bright spot in the picture, however, is that raw material buying has been slow for about six months and it is only logical to assume that, even though finished products have not been moving into consuming channels satisfactorily, stocks are low and replacement buying must of necessity soon get under way.

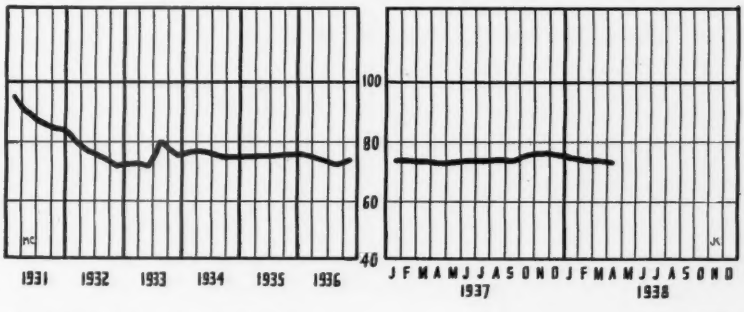
15 Essential Oils—Weighted Price Index. 1926 = 100.

The essential oils index of prices declined to 60.9, from the previous 61.6. Anise oil was 10 cents lower at 95 cents; geranium oil declined from $3.65 to $3.50; peppermint oil lost 15 cents to be quoted at $2.00. The market as a whole was very quiet and prices fluctuated strictly in accordance with competition accounted in the individual items.



15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.

Medicinal chemicals averaged slightly lower in price, the index declining from 74.5 to 74.1 for April. Cod liver oil declined from $27.00 to $26.00 a barrel, cream of tartar was one cent higher at 21¼ cents; menthol dropped from $3.10 to $3.05; mercury metal was five dollars lower at $72.00 a flask. Natural menthol in Japan continued just as firm in price as heretofore reported.



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TRAGACANTH

Reports from abroad indicate that the monopoly in Persian gum tragacanth has been able to renew its contract with the Government for another year. It seems possible, therefore, that present prices will continue steady regardless of current demand. The removal of all chance of a return to uncontrolled replacement costs has tended to make this market less nervous regarding the future trend of spot quotations.

Best quality number one gum sold on spot at from $2.75 to $3.00 as to quantity, although it was said that there were some quality number one gum offered at $2.60 per pound. Number two grade tragacanth is currently selling at from $2.40 to $2.65 per pound.

The Government monopoly in tragacanth was instituted in 1936 at which time the market was low at $1.30. Since that time there was a steady increase in values until the spot market reached $3.00. There was practically no recession in the primary market position since the inception of the monopoly, control of prices being absolute.

Following are imports of gum tragacanth into the United States: 1933, 2,364,000 pounds valued at $422,000; 1934, 1,275,000 pounds valued at $335,000; 1935, 2,474,000 pounds valued at $571,000; 1936, 2,093,000 pounds valued at $592,000; 1937, 3,244,000 pounds valued at $1,382,000.

MENTHOL

There was little general change in the position of Japanese menthol. The spot market was very quiet as far as new business was concerned and prices again become easier. The current decline amounted to 5c per pound with official quotations now at a range of from $3.05 to $3.15 as to quantity. It was stated that the larger manufacturing consumers have sufficient menthol on hand to carry them to the end of this year if necessary.

The Japanese continued to maintain a very firm primary market and, although stocks on hand are reported as high as 500,000 kin, which is not a particularly favorable statistical position, holders seem to be well financed. There are no present indications that replacement costs for natural menthol will be lower.

In 1937 menthol imports aggregated 459,000 pounds, against 342,000 during the preceding year and equaled the record established in 1932. Import figures for the past ten years in pounds are as follows: 1928, 254,000; 1929, 296,000; 1930, 308,000; 1931, 326,000; 1932, 351,000; 1933, 304,000; 1934, 425,000; 1935, 282,000; 1936, 342,000.

PEPPERMINT OIL

Spot quotations for peppermint oil were again shaded with the range for natural oil now at from $2.00 to $2.25 per pound and redistilled at from $2.20 to $2.25. Exceptionally dull demand has been responsible for the continued development of low price levels.

American peppermint oil, because of its exceptionally fine flavor, has always been in demand in the world markets. Average American exports of peppermint oil amount to about 60 per cent. of the total production. While still above the average, exports of peppermint oil declined substantially last year from the record established in 1936. The United Kingdom continued the largest export market in 1937, taking 155,000 pounds.

Peppermint oil exports from the United States for the last five years are as follows: 1937, 349,000 pounds, 1936, 386,000, 1935, 338,000, 1934, 238,000, 1933, 235,000.

Domestic production of peppermint and spearmint oils is concentrated in 5 states. Production during the past three years were as follows: 1937, 954,000 pounds, 1936, 957,000, 1935, 1,352,000.

Bulgarian peppermint oil is becoming an increasingly competitive factor in the foreign markets. That country's success in diverting rose acreage to peppermint and other aromatic plants, resulted in an estimated 200 per cent. increase in essential oil production last year. Bulgaria's exports of peppermint oil are reported to have aggregated 25,760 kilograms in the first 10 months of 1937 against 7,194 kilograms during the same months of the preceding year.

PAPAIN

Keen competition made business in papain on spot difficult in the extreme. Open quotations were down as low as $1.45 per pound for powdered material and conditions suggested the market was still tending to move in favor of buyers.

The use of papain in the United States has increased rapidly in recent years, judging from import statistics, which indicate that consumption in 1937 was three times greater than during the year 1932.

Papain is the dried milky juice obtained from the skin of the unripe tropical papaya fruit. In the United States papain has long been used in medicine and pharmacy as a digestant. While papaya fruit flourishes throughout the tropical and subtropical regions some is now being grown in Florida and California where it is attaining popularity as a fruit and salad material—Ceylon is the only country which produces papain in large quantities.

Imports of papain into the United States in recent years are as follows: 1937, 180,000 pounds; 1936, 204,000; 1935, 116,000; 1934, 111,000.

LEMON OIL

Italian oil on spot continued easy at from $2.20 to $4.00 per pound as to quantity and brand. Uncertainty regarding the Consortium undoubtedly had its affect on the market as prices in Italy appeared to be tending downward.

There are rumors to the effect that the proposal to establish a Sicilian lemon oil Consortium has been abandoned for the time being, and while these rumors lack definite confirmation, they seem to find support in the fact that the plan has not matured, although several months have elapsed since the proposition was first reported.

The export price for Italian lemon oil has fluctuated quite widely during recent months which is an indication of the absence of an organization for fixing a basis of export prices. The bergamot oil Consortium has not been an unmixed blessing to Sicilian producers, some of whom complain that the export prices fixed for that product have been sufficiently high to put a brake on the demand.

Reports as to the new season's production of lemon oil conflict, some suggesting an unusually large output, while others are of the opinion that the quantity available for export will be smaller than in a normal year. There seems to be no doubt that the lemon crop was a good one but the demand for boxed lemons has also been exceptionally good.

California oil remained firm. It seemed likely that stocks would prove normal this year.

GUM ARABIC

Amber sorts sold at 10c per pound during the early part of the period under review but during late trading the market firmed somewhat with the price range now at from 10¼c to 11c per pound.

Judging from the quantity of arrivals during December (says the Journal of the Sudan Chamber of Commerce), it may be said that the reports of a somewhat late crop in Kordofan have received full confirmation, but the apparent shortage has had no effect whatsoever on the trend of prices which continued to decline steadily.

The very substantial extent to which prices have fallen was due to a combination of numerous adverse factors, states this report, chief among which should be counted the relatively very warm weather that prevailed; the expectation of large arrivals during January; the acute competition among exporters, and lastly, the chilling attitude of foreign buyers. The quantity shipped during December, estimated at 500 tons, provides ample evidence of the excessive reserve shown by buyers abroad.

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COD LIVER OIL

Owing to the continued stormy weather in the Norwegian fishing grounds the catch of cod and the production of Norwegian cod liver oil have been far below last season's results at a corresponding date. The total production of cod liver oil as of March 7 amounted to 13,496 hectoliters as compared to 23,243 hectoliters as of the same date in 1937. Buyers, however, are holding aloof in the hope of an improvement in the conditions and as a result the spot market was dull and prices receded to a range of from $26.00 to $27.00 per barrel.

Owing to the small cod catch of 1937, production of cod liver oil was the smallest in years, and there was little carryover in the primary market at the end of the year.

A report from Norway indicates that stocks of medicinal oils were small in December and new production barely equaled the quantity exported. One exporter estimated stocks in Finnmark at 2,000 barrels, in Lofoten at about 10,000 barrels and total Norwegian stocks at about 20,000 barrels.

Imports of cod liver oil last year aggregated 5,916,000 gallons valued at $3,867,000 and represented the highest total ever recorded. These figures compared with 5,790,000 valued at $3,547,000 in 1936 which was the record up to that time.

While cod liver oil is produced widely throughout the world, Norway is the chief source of supply for the United States, accounting for approximately 50 per cent of the total. A steady increase in American imports of cod liver oil is indicated by the following figures: 1936, 5,790,000 gals. valued at $3,547,000; 1935, 4,607,000 gals. valued at $2,975,000; 1934, 3,470,000 gals. valued at $2,191,000; 1933, 3,433,000 gals. valued at $1,711,000.

IPECAC ROOT

The spot market for ipecac root was higher by 5c per pound, putting the range of quotations at from $1.25 to $1.30. This is quite a high price for this material. Ipecac is found in the interior and southern part of the State of Bahia, Brazil. No attempt is made to cultivate it, and the root is not found in abundance. It grows principally along the river banks so that if the collection season is particularly rainy and the rivers and streams are high there is great difficulty experienced in obtaining adequate supplies. Bahia exported only 182 bales of the root last year, against 249 bales in 1936.

ERGOT

Prices from Europe covering Spanish and Portugese material appeared on the weak side. Locally values were down to a range of from $1.25 to $1.40 per pound. Not much demand prevailed here.

EPHEDRA VULGARIS

A somewhat easier spot market developed in ephedra vulgaris during the past month with the price range now at from 13c to 14c per pound. This situation was the result of some improvement in imports but the primary reason was the decline in consumption caused by heavy carryover stocks of finished products containing ephedrine.

Imports of ephedra vulgaris amounted to 49,990 pounds valued at $2,387 in December—44,541 pounds coming from Japan and the rest from China—bringing the year's total to 788,240 pounds valued at $21,740. In 1936 imports of ephedra vulgaris aggregated 1,000,250 pounds and in 1935, 1,948,000. The consignment received from Japan in December was the second from that country in recent months —another totaling 33,000 pounds arrived in October.

Recently some 20,000 ozs. of ephedrine was offered in the open market by a large manufacturing consumer who discontinued the item containing ephedrine. This resulted in a competitive situation which broke the market for ephedrine alkaloid and salts sharply although prices are still considerably above normal levels.

AGAR

Poor consumption continued to feature the market for agar and agar products. While the primary market is firm, spot competition resulted in a decline of 5c per pound for number one grade, which placed the market range at from 85c to 90c per pound. Heavy imports last year also contributed to the competitive situation on spot.

United States imports of agar during 1937 reached an all-time record of 704,000 pounds valued at $418,000. During the past ten years imports of agar in pounds from Japan and value in dollars were as follows: 1936, 625,000, $275,000; 1935, 451,000, $162,000; 1934, 465,000, $156,000; 1933, 641,000, $161,000; 1932, 480,000, $185,000; 1931, 501,000, $325,000; 1930, 399,000, $306,000; 1929, $561,000, $435,000; 1928, 374,000, $274.000.

CASSIA OIL

Not much demand was noted for cassia oil. Buyers were reserved and put purchases down to actual consuming requirements. Because of the Far Eastern situation prices remained firm in all markets.

Re-exports of Chinese cassia oil from the British Colony at Hong Kong aggregated 389,000 pounds valued at $204,000 in 1937, against 332,000 pounds valued at $167,000 during the preceding year. Shipments to the United States during these periods increased from 113,000 pounds valued at $67,400 to 178,000 pounds valued at $108,600.

TARTARIC ACID

Tartaric acid advanced during the past month 1c per pound and is now quoted for prompt shipment, no contracts at the following schedule: 250 lb. bbls., 25¾c per lb., 100 lb. kegs 26¼c per lb.

MERCURIALS

Mercury metal declined again and is now offered at from $72.00 to $73.00 per flask. At the lower levels the market still lacked signs of improved demand sufficient to check the downward trend of values. Mercury at present levels is making it difficult to profitably sell home-mined metal.

The continued weakness in the raw material affected the mercurials, which were reduced again. Leading manufacturers now quote the following schedules for prompt shipment only, no contracts: Calomel $1.18 per lb., corrosive sublimate, powd. and gran., 91c per lb., crystals $1.05; red precipitate NFVI $1.42 per lb., mercury oxide yellow, U. S. P. $1.64; white precipitate, powd. $1.38 per lb.

FREIGHT RATES

The Interstate Commerce Commission has granted the railroads an advance in freight rates of 10 per cent. effective March 28th. Complete details are not available as to the commodities to which this advance will apply, but it is generally understood it will cover practically all outbound shipments. These increased freight rates will of necessity be passed on to raw materials in general.

ROCHELLE SALT

Leading manufacturers of rochelle salt have advanced prices 1c per pound and are now quoting for prompt shipment, no contracts: 225 lb. bbls., 16½c per lb., 100 lb. kegs 17c per lb., f. o. b. New York and Philadelphia.

CREAM OF TARTAR

Prices on cream of tartar were advanced the later part of last month by 1c per pound. The following schedules now prevail: 250 lb. bbls., 21¼c per lb., 100 lb. kegs 21¾c per lb., f. o. b. New York and Philadelphia, for prompt shipment, no contracts.

SEIDLITZ MIXTURE

Seidlitz mixture was advanced in price during the current trading period and is now offered in barrels, subject to change without notice, at 13⅞c per lb. Kegs, net 100 lbs., are ½c per lb. higher.

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